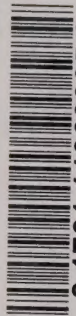


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# Mineral Development in Ontario North of 50°

Technical Paper #2



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Political Risk Analysis

R. V. Segsworth

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the ROYAL COMMISSION on the  
NORTHERN ENVIRONMENT

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MINERAL DEVELOPMENT IN ONTARIO NORTH OF 50°

Technical Paper #2

Political Risk Analysis

R.V. Segsworth

Chairman, Department of Political Science

LAURENTIAN UNIVERSITY

1980

This technical report provides background material for the final report Mineral Development in Ontario North of 50°, submitted to the Royal Commission on the Northern Environment by Laurentian University in September, 1982.

However, no opinions, positions or recommendations expressed herein should be attributed to the Commission; they are solely those of the authors.





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## PREFACE

This report is but one of several which will be submitted to the Royal Commission on the Northern Environment in the coming months. In essence, this report attempts to provide a serious, albeit severely constrained, analysis of the political risk attached to investment in a large number of countries which are major mineral producers. In addition, the analysis presents some evidence regarding the taxation of the mineral industry in a number of Canadian provinces.

In the process of preparing this report, I have received considerable assistance from a number of people. Dr. Hans Strauss, Department of Economics, Laurentian University, provided a number of tables, advice on mining taxation and encouragement. Mrs. Louise Pigeau, Secretary, Department of Political Science, Laurentian University, did yeoman service in typing and re-typing this document. Officials of several major mining companies provided information and advice regarding several of the topics dealt with by the report.

Although the contributions of these individuals and others were significant, they bear no responsibility for the contents of this report. That responsibility is mine.

RVS  
Sudbury Ontario  
October 1980





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Introduction:

In 1978 Rummel and Heenan argued that "despite the value of risk analysis, recent surveys indicate that few multinational corporations have developed systematic approaches for determining the political futures of their overseas markets. " <sup>1</sup> Louis Kraar has indicated that the Iranian Revolution, in which U.S. companies faced losses totalling one billion dollars, has altered the attitude of large investors towards the need for more serious political risk analysis.<sup>2</sup>

As companies become more sophisticated in their analysis of political risks inherent in potential host countries, for many the tendency to view "political risk as a particular unwanted event, or the probability of a particular unwanted event, rather than as the aggregate probability of a whole class of unwanted events"<sup>3</sup> remains.

This confusion is reflected in efforts to define political risk. Franklin Root suggests that "political uncertainty for the international manager refers to the possible occurrence of political events of any kind...at home or abroad that would cause a class of profit potential and/or assets in international business operations...When the international manager makes a probability judgement of an uncertain political event in a host country, he thereby converts a political uncertainty into a political risk."<sup>4</sup> Robock attempts to be more specific in arguing that "political risk in international business exists (1) when discontinuities

occur in the business environment, (2) when they are difficult to anticipate and (3) when they result from political change."<sup>5</sup>

The difficulty with these types of definition is that they are too broad. As Haendel, West and Meadow point out, "it is difficult ... to accept Robock's implicit contention that all unanticipated discontinuities in the business environment that result in political change can be considered "political risks"."<sup>6</sup> They define political risk as "the risk ... of occurrence of some political event(s) that will change the prospects for the profitability of a given investment."<sup>7</sup> For the purposes of this report, this definition is the one which is used. Its operational definition will become more apparent in a later section of the report.

#### Doing Political Risk Analysis:

There are basically four approaches used in conducting political risk analysis. These are the "grand tour", consulting the expert(s), delphi techniques and quantitative analysis.

Frequently potential investors conduct preliminary market research and then follow up by sending an executive on a fact-finding tour. Discussions are held with local leaders, government officials and business men. After what might be a quite extended visit, the executive returns home to present his findings to senior management.

This grand tour approach suffers from the selective and impressionistic nature of the information gathered by such a



process and consequently, may more frequently than one would wish result in poor investment decisions. Kraar cites an excellent example of this process.

"A few years ago Aris Gloves, a division of Consolidated Foods, wanted to spread its risks beyond the Philippines, its only manufacturing base. In 1976, the company picked a spot that its vice-president, James McCorry, says "everyone, including the U.S. embassy, described as a happy, sleepy country." This carelessly promised land was El Salvador. Within some two years, political turmoil hit the Aris plant, with leftist dissidents holding its president and about 120 local employees as hostages for nine days until the company agreed to wage increases that it couldn't afford. Six months ago, Aris fled from El Salvador.<sup>8</sup>

In an effort to prevent such errors, many companies are attempting to acquire expertise. Mobil Oil appointed former U.S. Ambassador Christian Herter Jr. as its vice-president for governmental affairs. Henry Kissinger is a paid advisor to Merck, Goldman, Sachs, and Chase Manhattan Bank.

Some companies have gone so far as to internalise such expertise with apparent positive results. Gulf Oil's Middle East expert, Richard Macken, warned of the Shah's probable fall four months in advance. This allowed the company to begin planning to cope with the loss of Iranian oil which then amounted to ten percent

of Gulf's crude supplies.

The Delphi techniques and the reports which flow from their application are becoming increasingly popular. The three most common and influential ones are the BERI (Business Environment Risk Index), BI (Business International) and the WPRF (World Political Risk Forecast) Indices. These indices represent the considered judgements of experts in academe, government and business regarding political stability and business climates for a large number of countries throughout the world.

Rummel and Heenan argue that "invariably ... the technique begins to produce erroneous conclusions"<sup>9</sup> for methodological reasons. Although one U.S. corporation risk analyst calls such indices "substitutes for thought,"<sup>10</sup> there is no question that a large number of corporations feel that indexing is a useful tool.

Rummel and Heenan argue that "with much the same precision that the econometricians apply to the forecast of economic events, decision-makers can gauge a nation's political future."<sup>11</sup> Haendel, West and Meadow take a more conservative approach and argue properly, in my opinion, that "the evaluative tools needed to estimate socio-political risk are far less developed."<sup>12</sup> Even if Rummel and Heenan were correct, the time and resource limitations imposed on this study make it impossible to apply such rigorous techniques.

It is far more appropriate, given these circumstances, to opt for the integrated approach which Rummel and Heenan ultimately propose.<sup>13</sup> Friedman agrees. His experience in Zaire convinces

him that "all sources of information, all known methodologies and analytical tools, all feasible judgements based on experience and sophisticated intuition"<sup>14</sup> are required.

### Methodology

In view of the constraints indicated above, the methodology is not as precise as I would ordinarily prefer. It is, however, sufficient to allow us to assess the political risk of our major competitors.

Essentially, the approach used involves three basic steps- determination of major competitors, assessment of political stability and an analysis of the economic climate.

In order to determine who our major competitors are, we examined mine production statistics from 1975 to 1979.<sup>15</sup> This indicated not only who the major producing countries are, but also the procedure did indicate, albeit crudely, some basic production trends.

In the case of the Soviet Bloc countries, Yugoslavia and other Communist States, no further analysis has been undertaken. This decision is in accord with the Foreign Policy Research Institute work on the subject. The researchers there argue that these countries should be excluded because "of the low likelihood of significant U.S. investment in them in the near future and also because of the very different political considerations involved in such investments."<sup>16</sup>



New Caledonia poses a somewhat different problem. It remains a colony of France and as such does not constitute a politically sovereign state. Although New Caledonia is a major producer of nickel, because of its political status, it has been excluded from the analysis.

For these reasons, this project concerns itself with twenty-three countries. These countries are:

- |                       |                       |
|-----------------------|-----------------------|
| 1) Australia          | 13) Morocco           |
| 2) Brazil             | 14) Papua-New Guinea  |
| 3) Canada             | 15) Peru              |
| 4) Chile              | 16) Philippines       |
| 5) Colombia           | 17) Rhodesia-Zimbabwe |
| 6) Dominican Republic | 18) South Africa      |
| 7) Ghana              | 19) Sweden            |
| 8) India              | 20) U.S.A.            |
| 9) Indonesia          | 21) West Germany      |
| 10) Japan             | 22) Zaire             |
| 11) Liberia           | 23) Zambia            |
| 12) Mexico            |                       |

The political stability assessment is based on three major indicators. These are domestic instability, foreign conflict and political climate. By domestic instability we mean tendencies toward revolt, coups, and turmoil. By foreign conflict we mean the tendency to manifest hostility toward other countries. By political climate we mean the tendency of a given state to ideological swings in government.

The economic climate refers to a general evaluation of the foreign investment climate. Because of the limitations imposed by the study, reference will be made primarily to risk indices and other secondary sources which are available. Basically, the concern here is with the government's predisposition toward economic intervention.

On the basis of the political stability and economic climate assessments a prognosis regarding comparative (dis)advantage for each country will be offered. No effort is made to provide the misleading accuracy of a statistical probability. Rather, the prognosis reflects the subjective judgement of this author on the basis of his review of the data.

Chile:

Chile is a major producer of copper and silver.

After Allende was removed from office and the authoritarian regime of General Pinochet took over, dramatic improvements in the state of the Chilean economy began to take place. Inflation, which reached 1,000% in 1973 was reduced to approximately 38% in 1979. Real growth was 7.3% in 1978 and 7.5% in 1979.

On the negative side of the picture is unemployment. It remains at about 12%. The energy crisis, particularly the loss of supply from Ecuador and Iran, has forced the country to go to the spot-market and this appears to be preventing any significant decrease in inflation in the near future.

Although the large mines were nationalized in 1971, the current government has attempted to attract foreign investment.<sup>17</sup> In 1977, the Pinochet government passed new laws which removed limits on the remittance of profits and granted foreign investors the same rights as local investors. In the past two year, \$200 million in foreign capital has been invested in the Chilean mining industry.<sup>18</sup> Time reported in January 1980, that by the end of the 1980's it was expected that \$5 billion in new foreign capital would be poured into the Chilean economy.<sup>19</sup>

This change in the investment climate is one reason why Exxon is currently considering a \$1.2 billion investment in Chilean copper production.<sup>20</sup> Such a move reflects the attractiveness of the policy of the Chilean government, announced in 1978, of allowing foreign investors to own smaller ore bodies in the country.

Exxon is hesitating because of what has been described as an "uncertainty factor".<sup>21</sup> This reflects some of the political and social conditions of the country.

In terms of its external relations, Chile has not dramatically improved its position. In 1978-79 the Beagle Channel dispute with Argentina threatened to result in armed hostilities. This was averted by the timely mediation efforts of the Vatican. In January 1979 Peru expelled Chilean diplomats in Lima. Peru accused Chile of attempting to undermine the Peruvian Government. In 1979 the United Nations Human Rights Commission Report pointed to the numerous violations of fundamental human rights which the Pinochet government has condoned and carried out in recent years.



In general terms, however, there does not appear to be any serious threat to the stability of the Chilean political system from outside its borders. The more important threats appear to be internal.

One of the most important of these internal forces has been the union movement. As a result of a number of politically motivated strikes in 1977 and 1978, the government banned the miners' union on October 19, 1978. The government also extended its state of emergency for a further period to September 1980. The new labour laws which were promulgated in July of 1979 did little to appease the miners. The law allowed miners to strike legally for only sixty days. After thirty days of strike, the mining company was legally empowered to lockout its workers and hire replacements. This law resulted in a costly strike at El Teniente, the largest of Chile's copper mines.

Although there is considerable opposition within the country to the government, the Pinochet dictatorship has demonstrated a consistent ability to maintain power and control. Unless there are some unforeseen developments, it is expected that the country will remain relatively stable internally.

For these reasons, we must conclude that Chile will be an attractive investment opportunity in the future. It may be able to attract capital which might otherwise have gone into the development of the Canadian mining industry. Chile, clearly, is likely to continue to be a serious competitor in the search for investment capital.

TABLE 1

PERCENTAGE WORLD MINE

PRODUCTION - COPPER

CHILE

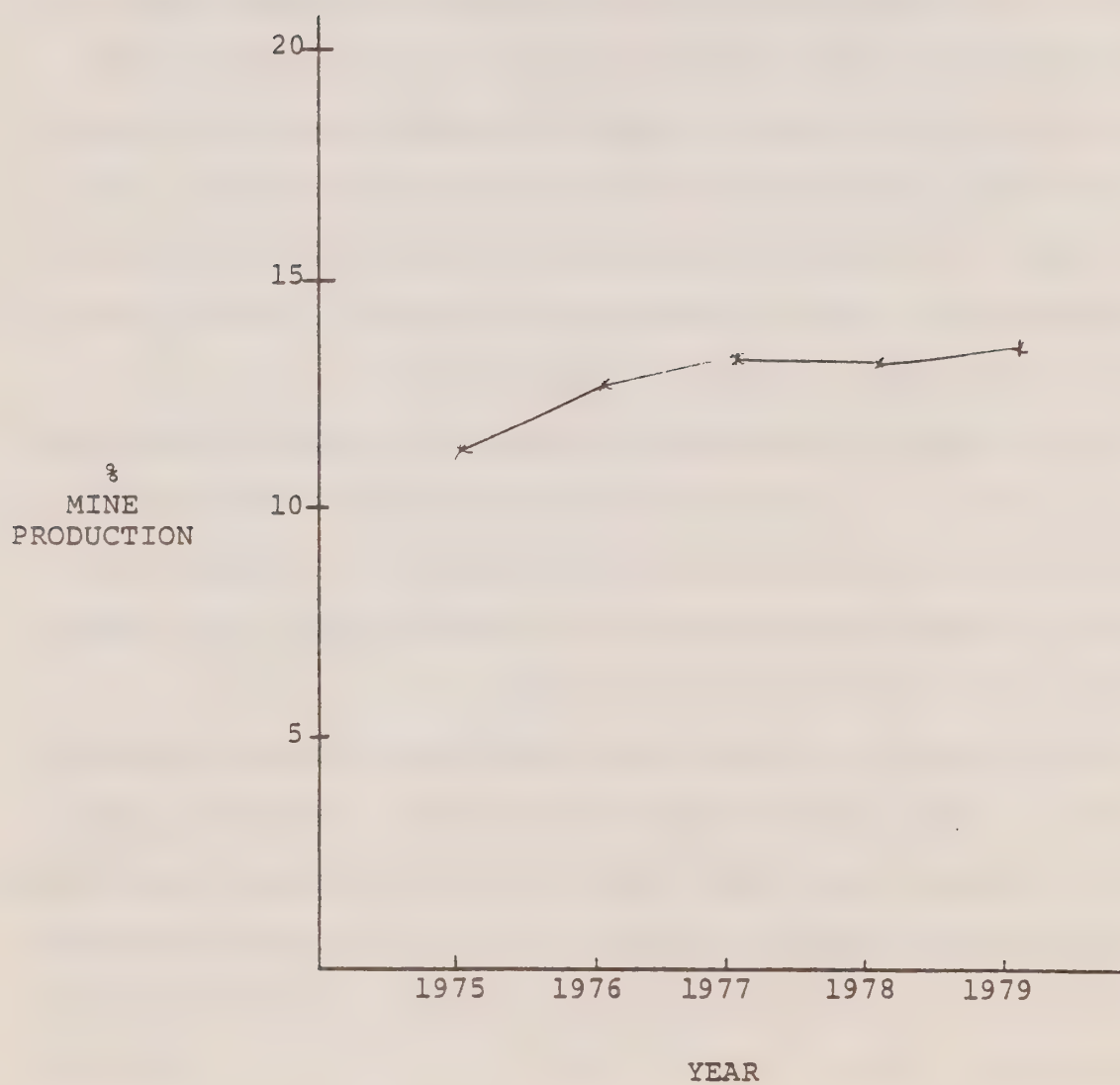
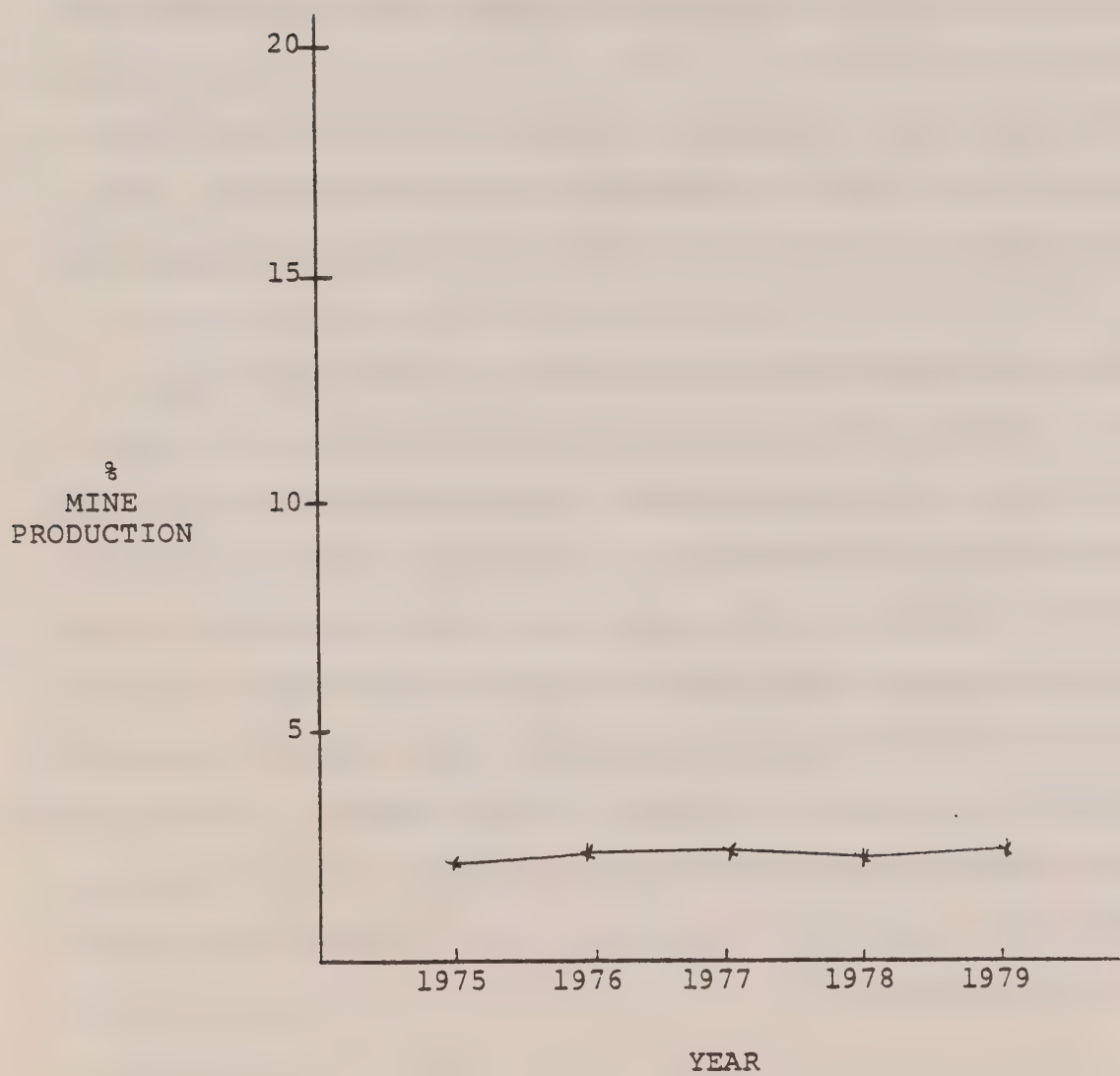


TABLE 2

PERCENTAGE WORLD MINE

PRODUCTION - SILVER

CHILE





Peru:

Peru is a major producer of copper, lead, silver and zinc.

The economic picture insofar as Peru is concerned is not as optimistic as that for Chile. Because of the financial difficulties of the Peruvian government, the IMF approved SDR of 184,000,000 until December 1980. A special arrangement with foreign creditors has been established. Only 10% of the foreign debt due in the 1979-80 period will be paid immediately. The remaining 90% (\$568,000,000) will be repaid over a seven year period beginning in 1982.

The major note of optimism in terms of its economy is the discovery of additional oil deposits in the late 1970's. This has encouraged the Central Bank of Peru to predict a balance of payments surplus of \$100 million in 1980.

The experience of the oil industry is revealing for our purposes. Occidental Petroleum, a major investor in Peru, was affected by new economic laws which were introduced in 1980. Had the laws been applied retroactively, Occidental would have faced a bill of \$110 million in back taxes. As a result of negotiations between Occidental and Peruvian officials an agreement was reached which gave the country an increased share of the profits realized by Occidental's petroleum activities in the country. This reflected a general pattern in many developing countries which Sachdev described well. He noted that "joint" ventures are increasingly ending up in divorce."<sup>22</sup>

This increasing governmental activity is reflected in the mining industry as well. Metal Statistics 1977 reports the nationalization of the Cerro de Pasco mines. At the present time the government owns a major share of the mining activities. There is, however, a large U.S. consortium which continues to operate a number of copper deposits in the country. One would expect that the patterns predicted by Sachdev will apply in this economic activity in the future.

Politically, Peru manifests somewhat less stability than Chile. Belaunde, who was subjected to a coup by the Peruvian military in the mid 1970's has been re-elected President. This pattern of election, coup, election is a familiar one in Peru. At the present time, however, President Belaunde fails to hold majority support in the Peruvian Congress.

Partly because of a 70% inflation rate, Belaunde is attempting to attract foreign investment, particularly from the U.S. American reaction this far has been one of skepticism.

Although there have been few incidents which affect the integrity of the state, there have been several internal disruptions in recent years. Miners' strikes are common examples. The August 1978 miners' strike led to a state of emergency and the banning of strikes in September 1978. January 1979 saw a call for a general strike which was only averted when the government lifted constitutional guarantees of civil liberties. The July 1979 miners' strikes resulted in the declaration of a state of emergency and the application of repressive measures by the government.

It may be that Peru possesses significant deposits which could be more fully developed. The information indicated above suggests that this is likely to be a rather risky investment for the foreign investor. On this basis, I would conclude that Peru is unlikely to be a major competitor in the search for investment capital to develop and/or expand its mining activities.



TABLE 3

PERCENTAGE WORLD MINE  
PRODUCTION - COPPER  
PERU

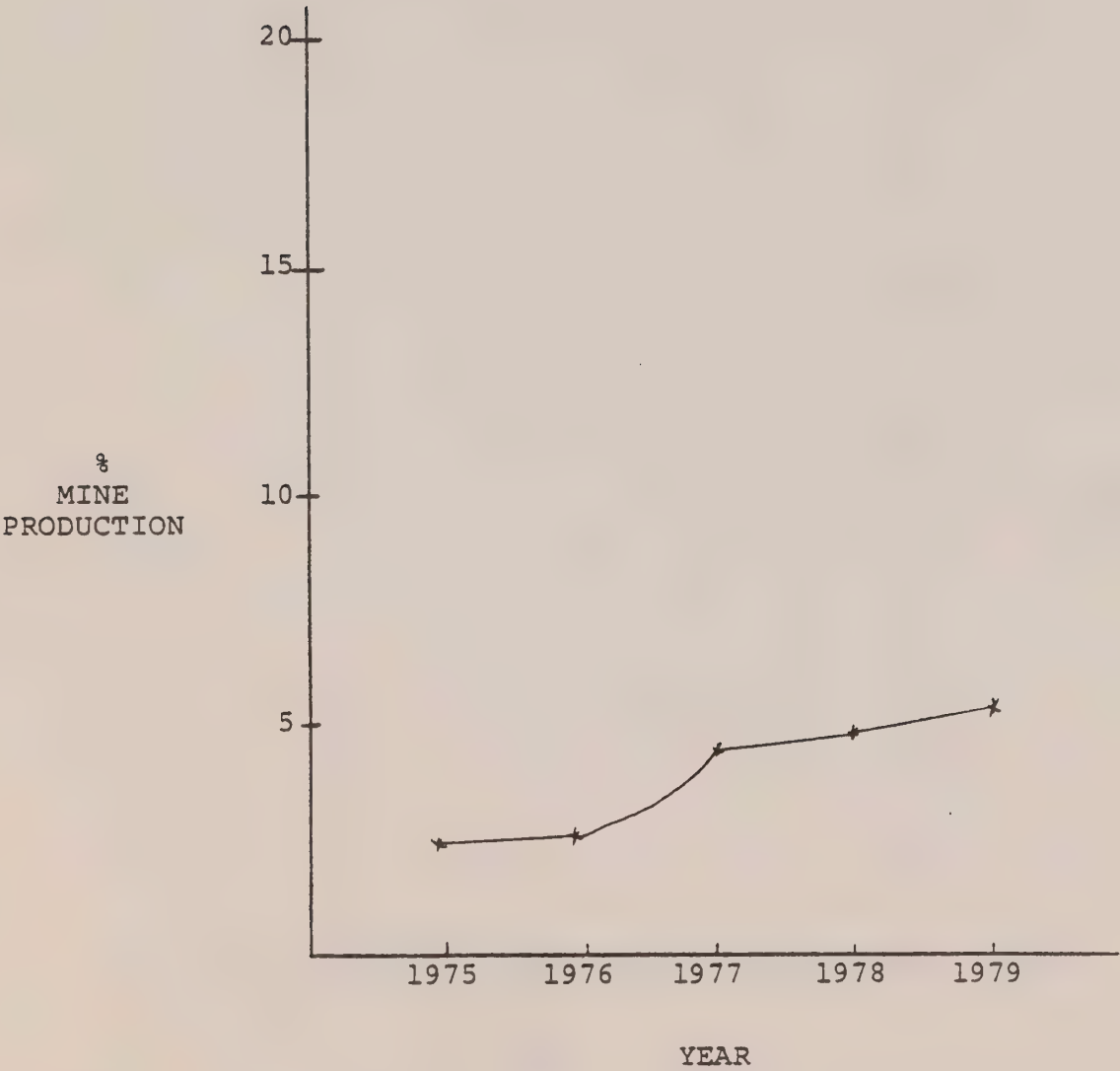


TABLE 4

PERCENTAGE WORLD MINE

PRODUCTION - LEAD

PERU

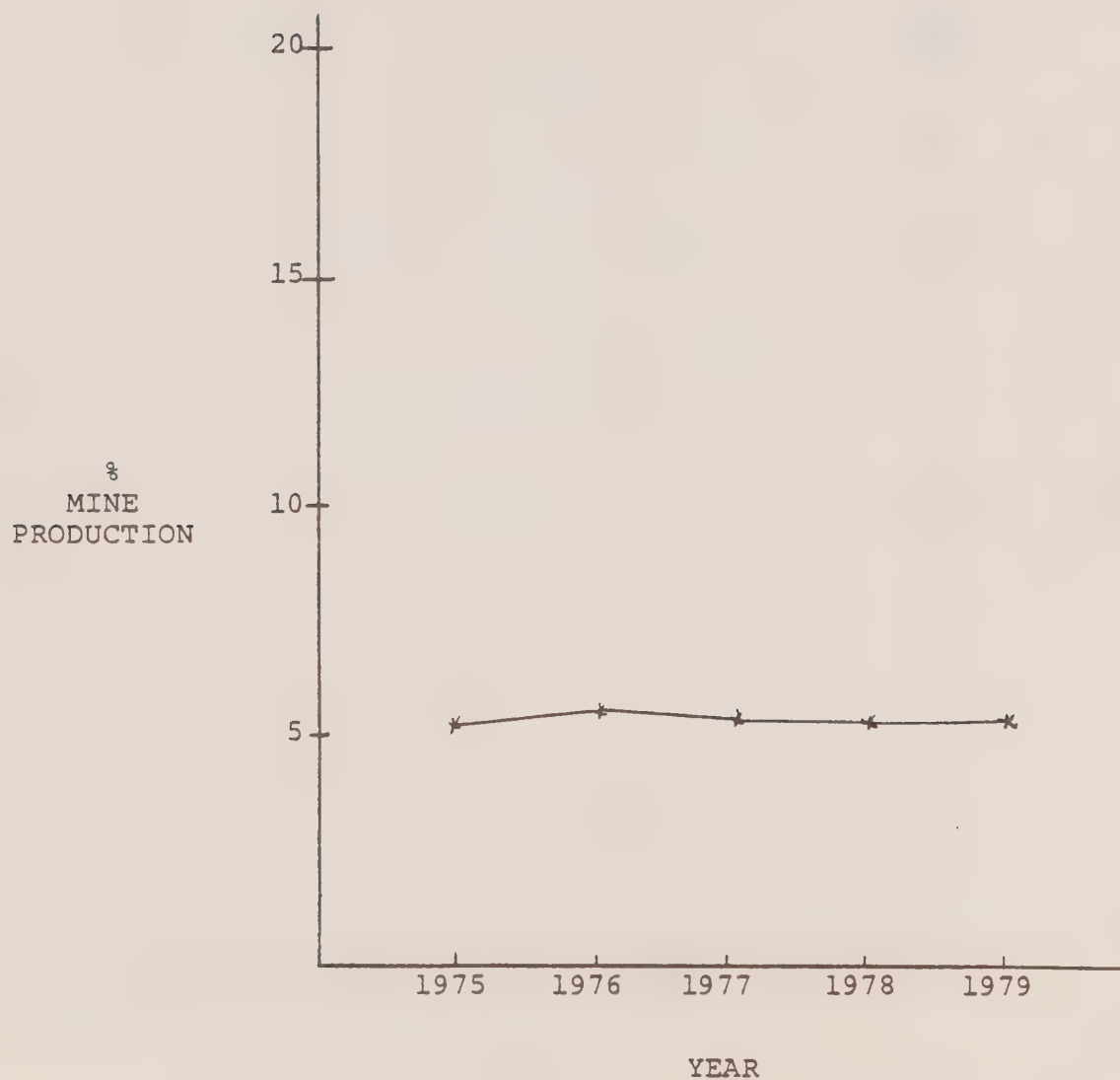


TABLE 5

PERCENTAGE WORLD MINE

PRODUCTION - SILVER

PERU

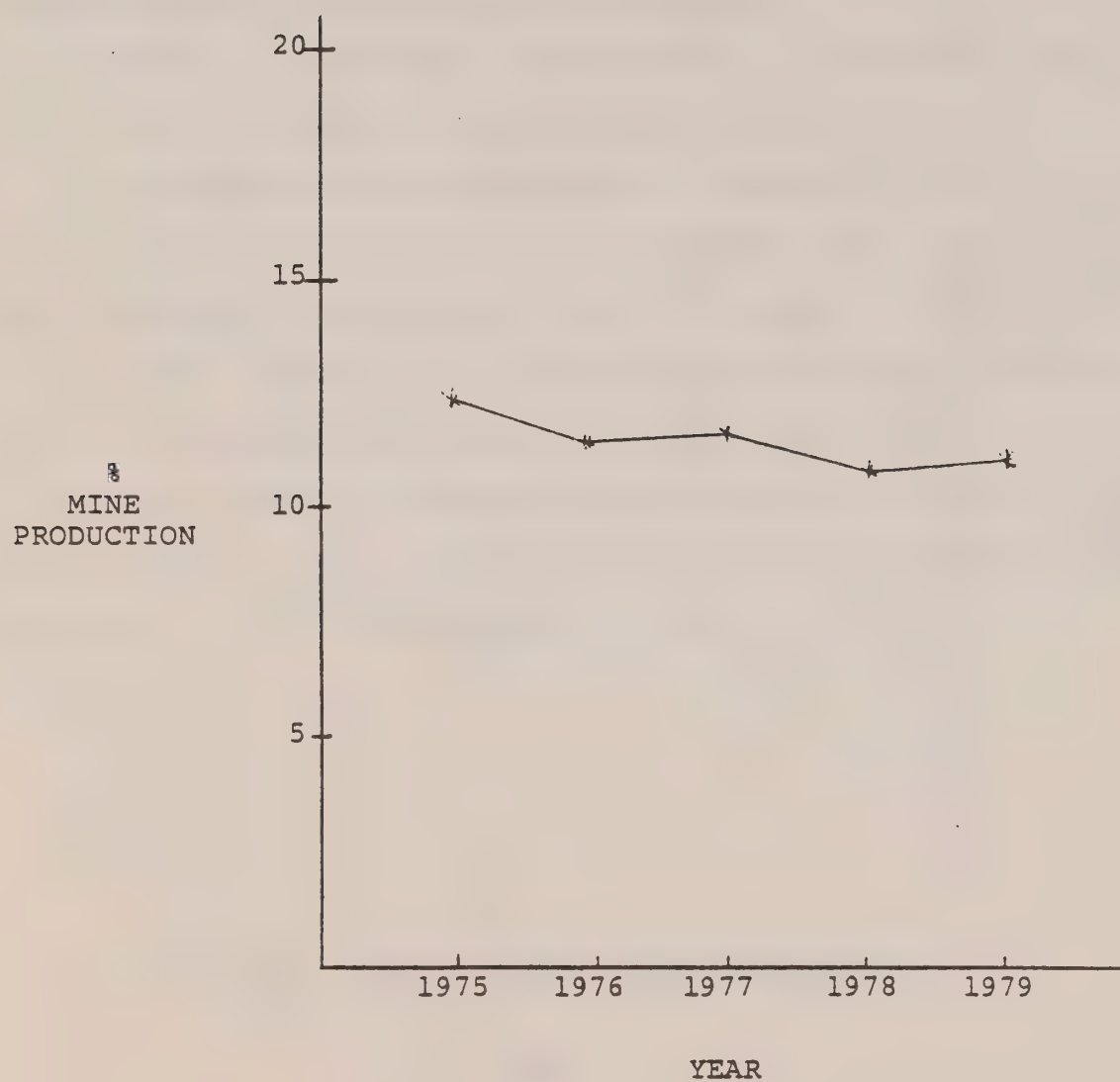


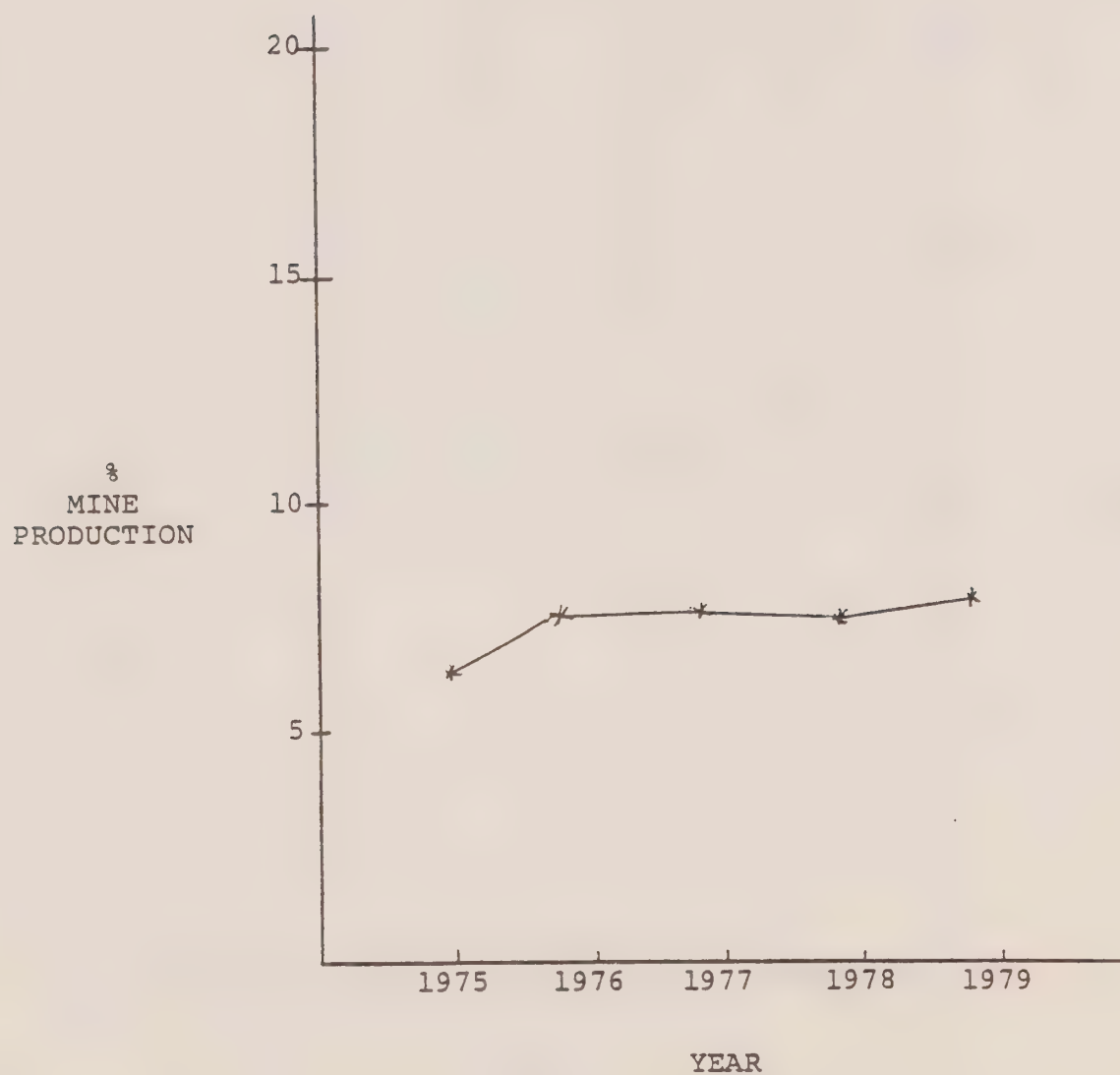


TABLE 6

PERCENTAGE WORLD MINE

PRODUCTION - ZINC

PERU



Indonesia:

Indonesia is a major producer of copper and nickel.

The situation insofar as Indonesia is concerned is the easiest to present because of the consensus of a number of observers.

In a 1978 study Rummel and Heenan predict that Indonesia faces a difficult future. They project greater political instability due to internal turmoil than in any period since the 1950's. They also claim that the external debt position of the country has reached "crisis" proportions and they expect an increase in what they describe as "creeping" expropriation. In general, they rate the country as a rather high risk for potential investors.<sup>23</sup>

This conclusion is supported by a number of recent risk indices. The BERI rating for Indonesia is 45.5 (high risk). The BI rating is 58 (moderately high risk). The WPRF suggests a 31% probability of investment losses in the next eighteen months and a 45% probability of investment losses in the next five years.<sup>24</sup>

On this basis, it seems clear that Indonesia is not likely to be a major competitor in the search for foreign capital for mining development in the near future.

TABLE 7

PERCENTAGE WORLD MINE

PRODUCTION - COPPER

INDONESIA

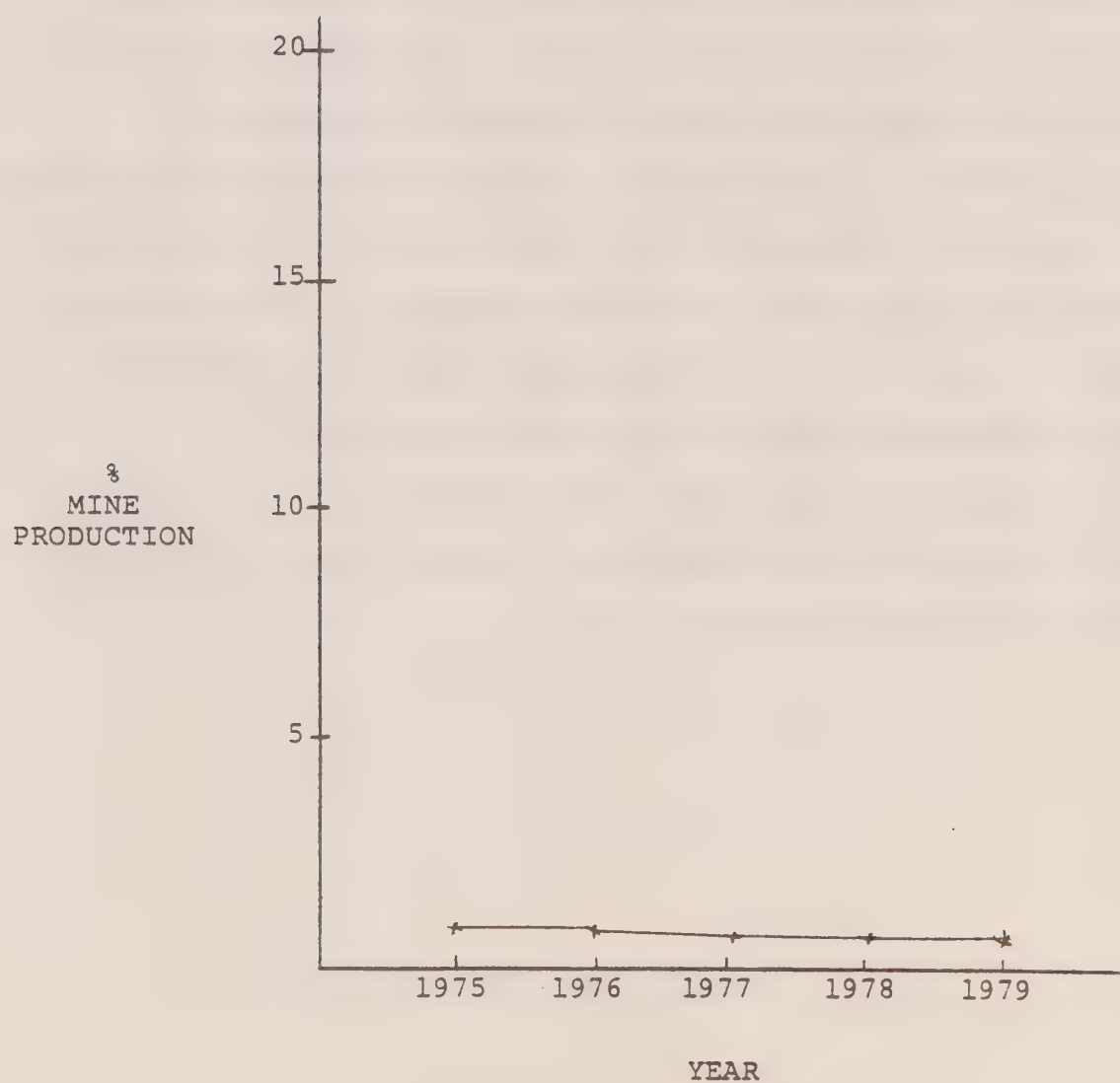


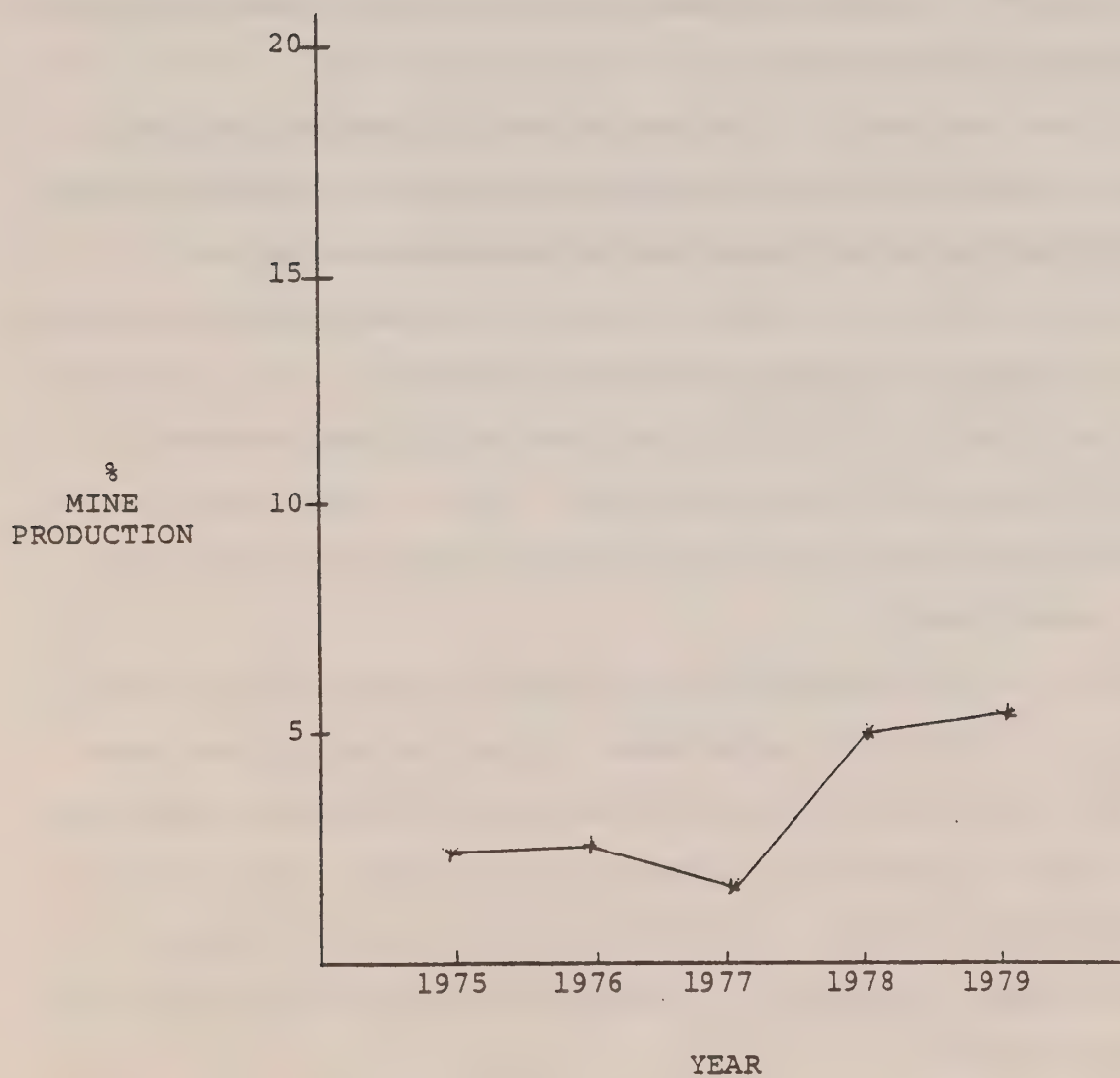


TABLE 8

PERCENTAGE WORLD MINE

PRODUCTION - NICKEL

INDONESIA



Zaire:

Zaire is a major producer of copper.

This is a country with significant potential. It is also a country which poses several risks for the potential investor.

The economic position of the country is not a pleasant one. In November 1978 its debt exceeded \$3,000 million. By 1979 the Journal of Commerce reported Zaire's debt to be approaching the \$4 billion mark. Repayment of debt was \$600,000 - 700,000 in arrears by 1978. The GDP declined by 5% in 1976-77 and inflation was running at 64% in 1977.

This has resulted in a series of devaluations of the national currency. A fifty percent devaluation in January 1979 was followed shortly thereafter by a further thirty percent devaluation.

Efforts to aid in economic recovery have not been too successful. The Journal of Commerce reported on March 26, 1979 that Zaire rejected an offer of a \$210 million loan by Citibank because it would not accept all of the conditions. One of these conditions was a requirement that the country not fall behind in the repayment of current debts.

In part, this depressing picture results from the political instability of the Mobutu government. This instability was best reflected by the rebel invasion of Katanga in 1978 which resulted in the closing of the mines operating in that area. Many of the skilled European managers, technicians and engineers left the country and Metal Statistics 79 reports that they had not returned by the end of 1979.

Rebel activity also affects the important Benguela rail system which is crucial for the transportation of copper to customers.

This rail link was closed in 1975. Although it was officially re-opened in 1979, it never really became operational because UNITA rebels destroyed thirty-seven miles of it immediately after the official re-opening. There are also a number of other rebel groups such as MARC and the FNLC which have been raising havoc internally.

Although Gulf has been able to work successfully with the Mobutu Government in recent years, I am inclined to support the assessment of experts employed by United Technology.<sup>25</sup> They describe Zaire as only marginal and feel that it is not attractive for investment purposes at this time.

On this basis, it seems reasonably clear that Zaire is not likely to be a major competitor in the quest for capital investment funds in the near future.

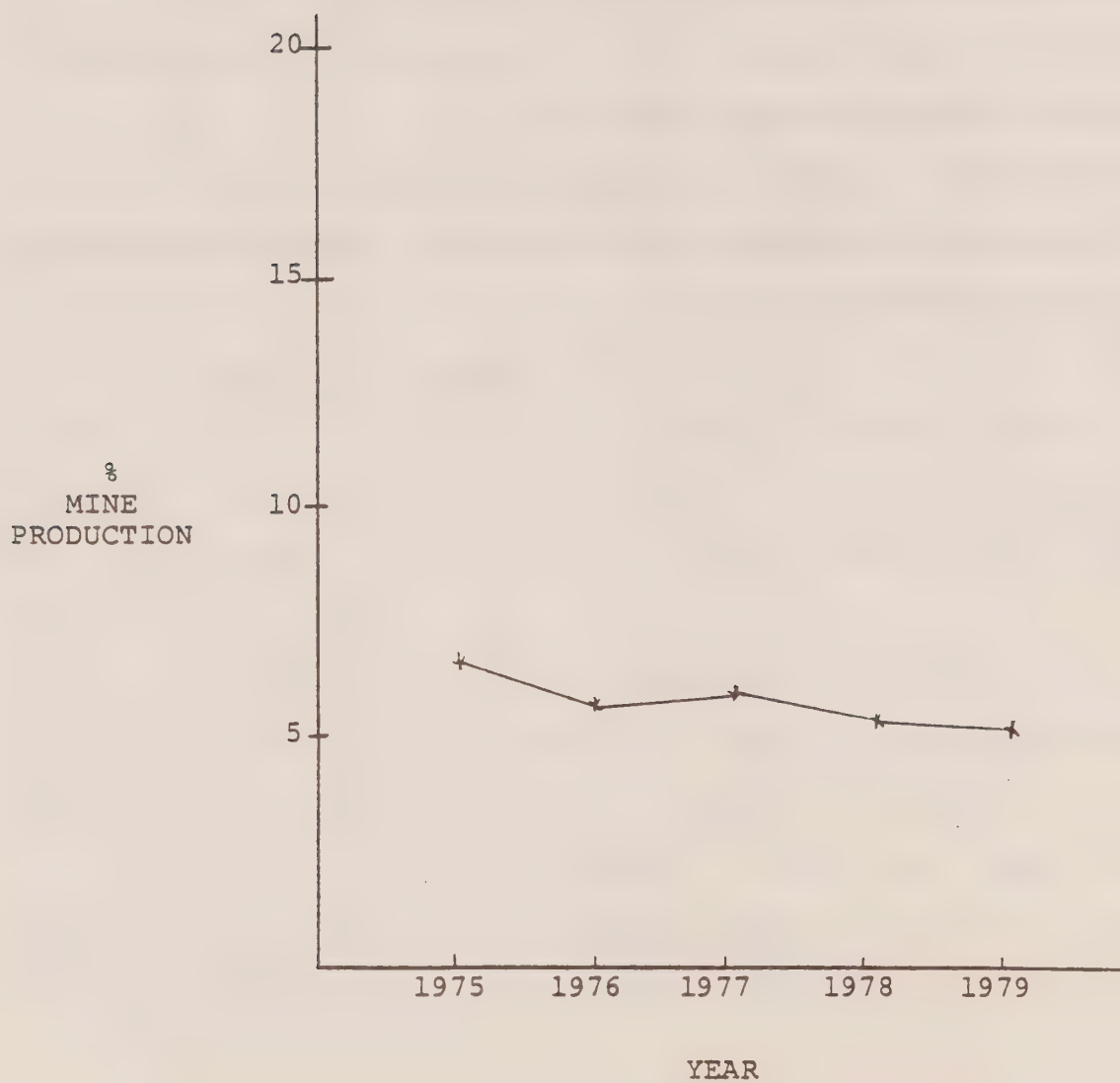


TABLE 9

PERCENTAGE WORLD MINE

PRODUCTION - COPPER

ZAIRE



Zambia:

Zambia is a major producer of copper.

Zambia appears to provide rather greater opportunity for investment than Zaire. It recently re-elected Kenneth Kaunda, President and hosted a Commonwealth Conference.

Its political problems tend to involve its neighbours. In particular, Zambia has played host to Rhodesian guerrilla movements in the past and has been hit by pre-emptive strikes by Rhodesian forces. Despite the transition in Rhodesia, Zambia maintains its position of hostility to the new Zimbabwe Rhodesia constitution.

The government owns fifty-one percent of the two big copper groups operating in the country. Sachdev expects that there will be increased government ownership and control over time.<sup>26</sup>

The copper industry is hampered by serious transportation difficulties. The Benguela rail system problem has been described above. In addition, the port facilities within the country are not sufficient to handle current production. These factors help to explain why the Zambia Metal Marketing Corporation felt compelled to issue a force majeure in 1978 and reduce sales contracts by fifteen percent.

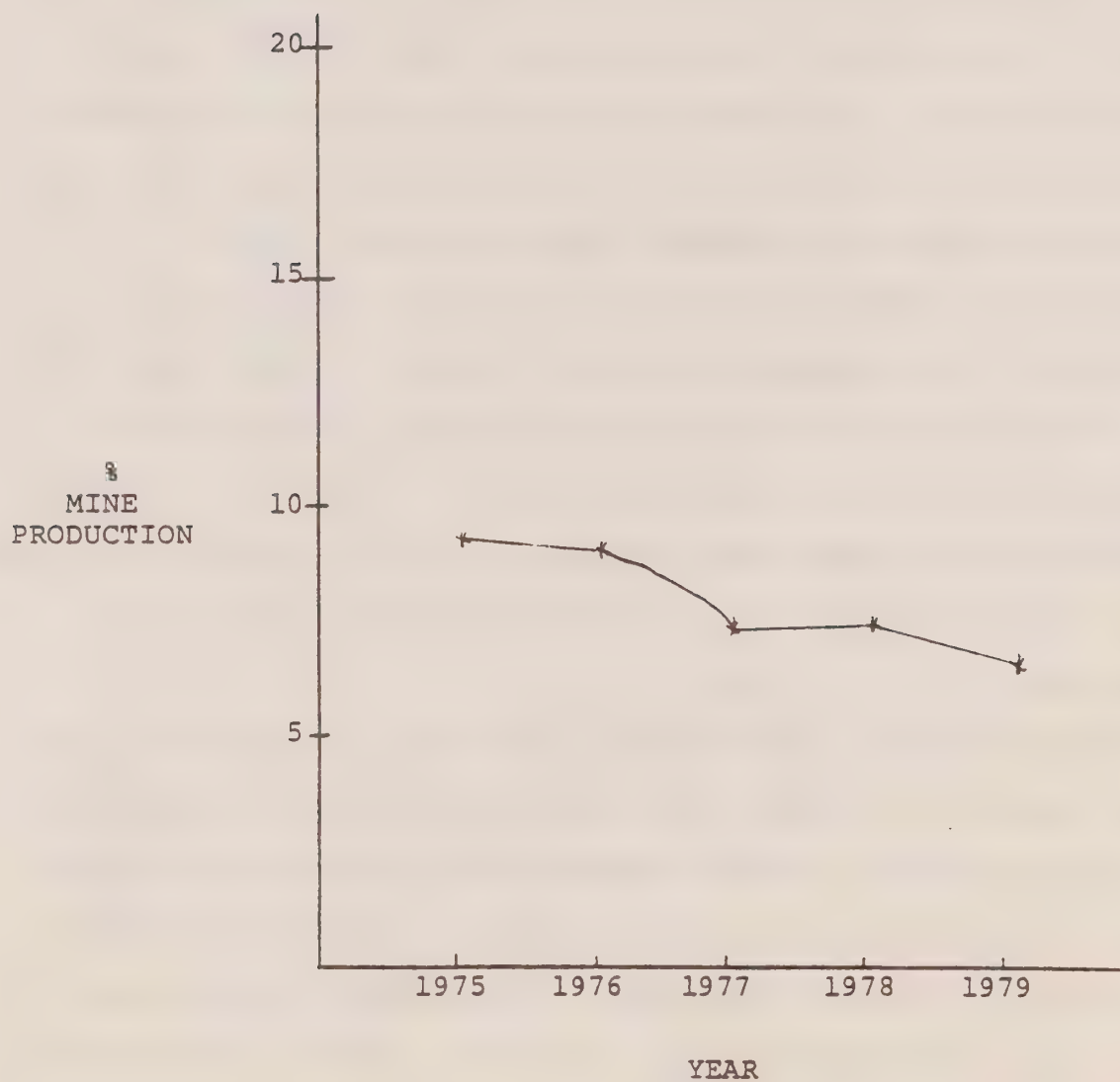
Although Zambian copper deposits are rich and extensive, and although Zambia is a rather stable country politically, there are some serious problems with the economic and transportation infrastructure which reduce the attractiveness of the country insofar as investment in mineral development is concerned. Until such time as these difficulties can be corrected, Zambia is less likely to be a major competitor for foreign capital than she otherwise would be.

TABLE 10

PERCENTAGE WORLD MINE

PRODUCTION - COPPER

ZAMBIA



### Republic of South Africa:

South Africa is a major producer of gold, iron ore, nickel and platinum.

If economic indicators alone meant anything, then one would have to conclude that South Africa is an excellent place in which to invest. Its Minister of Finance has predicted in his 1980 budget a real growth rate of six percent. In the same document the Minister notes that governmental income exceeded predicted levels by twenty percent in the preceeding year because of the unexpected increase in the price of gold.

F.T. Haner, the creator of the BERI index comes to very different conclusions. He feels that the internal political and social conditions which reflect and result from racial discrimination policies make the future of South Africa very difficult to predict. He rates South Africa as a high risk investment.<sup>27</sup> Although he revises his estimate slightly in his first quarter (1980) report, Haner still places South Africa six positions lower than Canada in terms of investment risk.<sup>28</sup>

Even Herman Nickel who argues that there is a case to be made for investment in South Africa, agrees that the "U.S. investment is a needed force for peaceful change - but its long-term future inevitably depends on how much change the Afrikaner government allows."<sup>29</sup> Given the recent labour troubles which Ford and other American firms have experienced in South Africa, and the continuing repression of the black population by the South African government, the risk appears to be greater than Nickel felt it might be.

From this perspective, it appears probable that South Africa will continue to be viewed as a greater investment risk than Canada.



TABLE 11

PERCENTAGE WORLD MINE  
PRODUCTION - GOLD  
SOUTH AFRICA

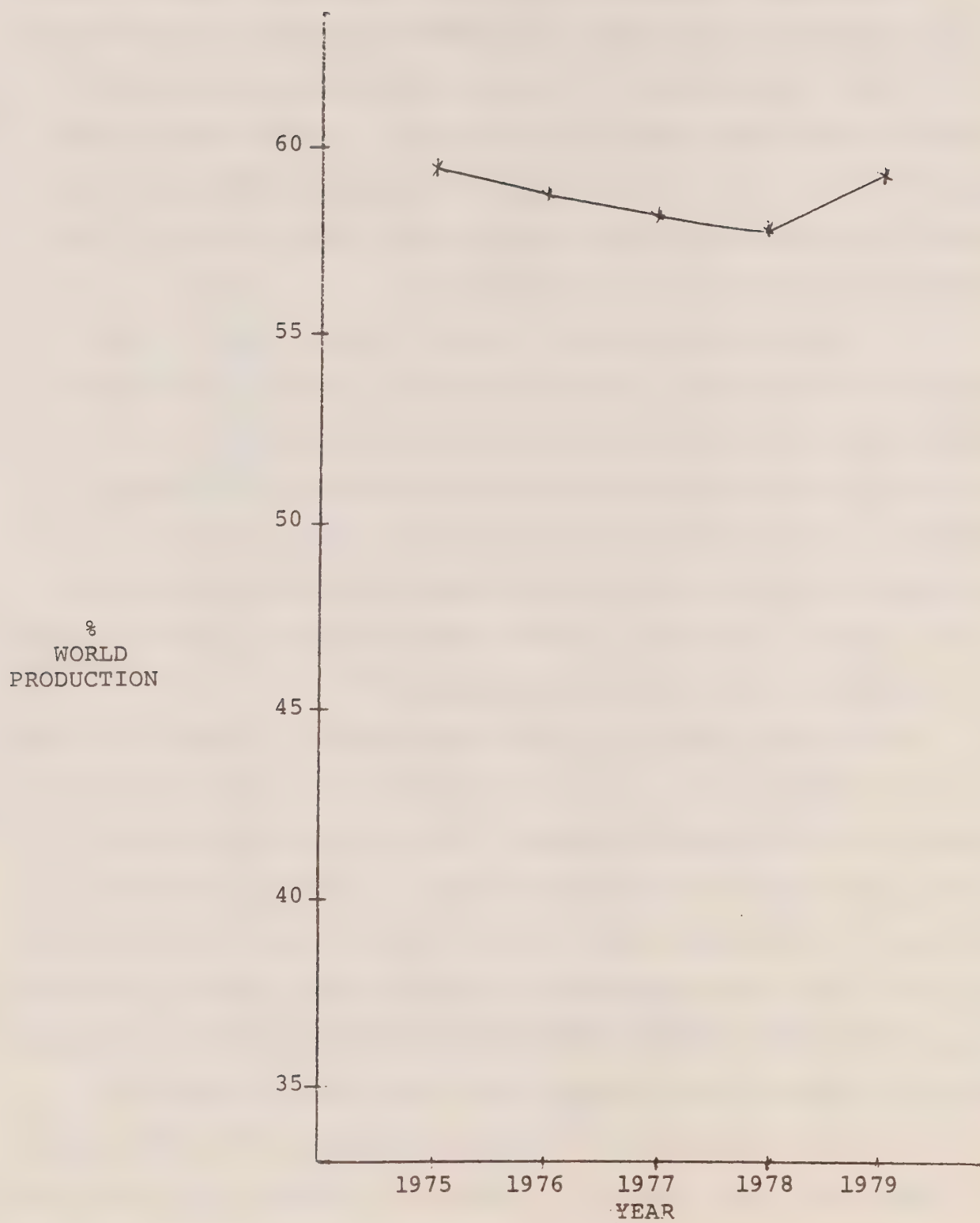


TABLE 12

PERCENTAGE WORLD MINE  
PRODUCTION - IRON ORE

SOUTH AFRICA

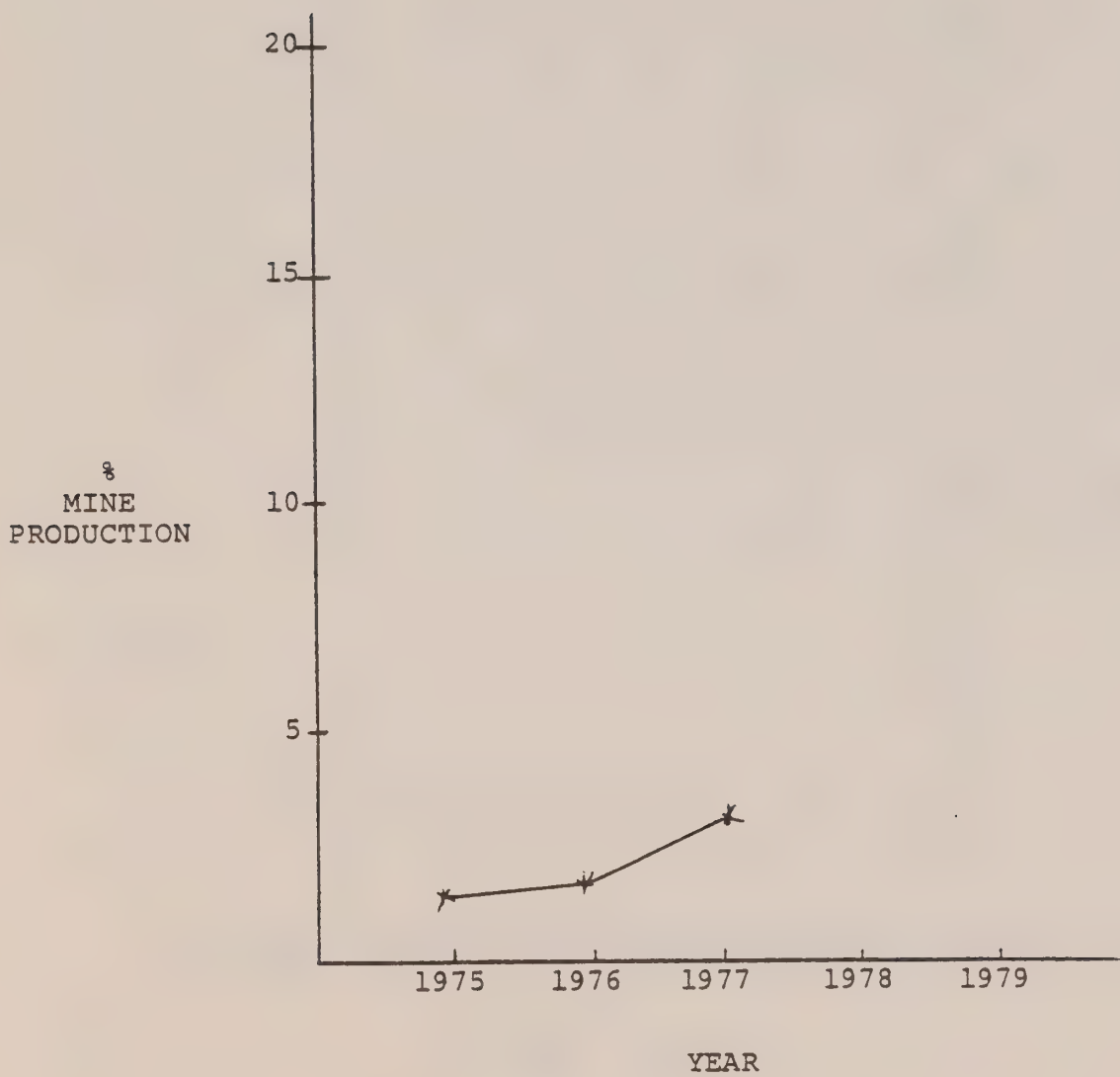


TABLE 13

PERCENTAGE WORLD MINE

PRODUCTION - NICKEL

SOUTH AFRICA

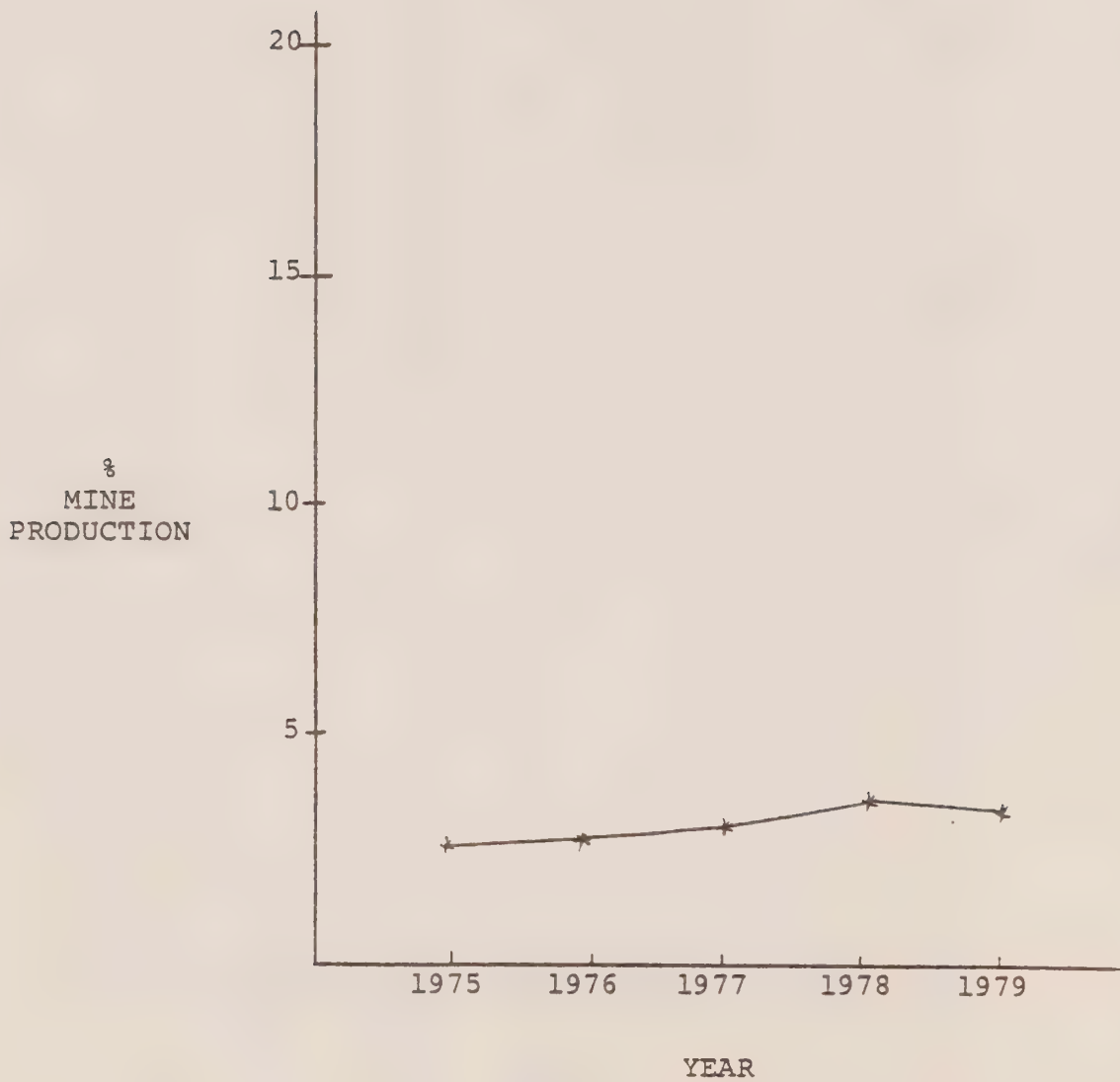
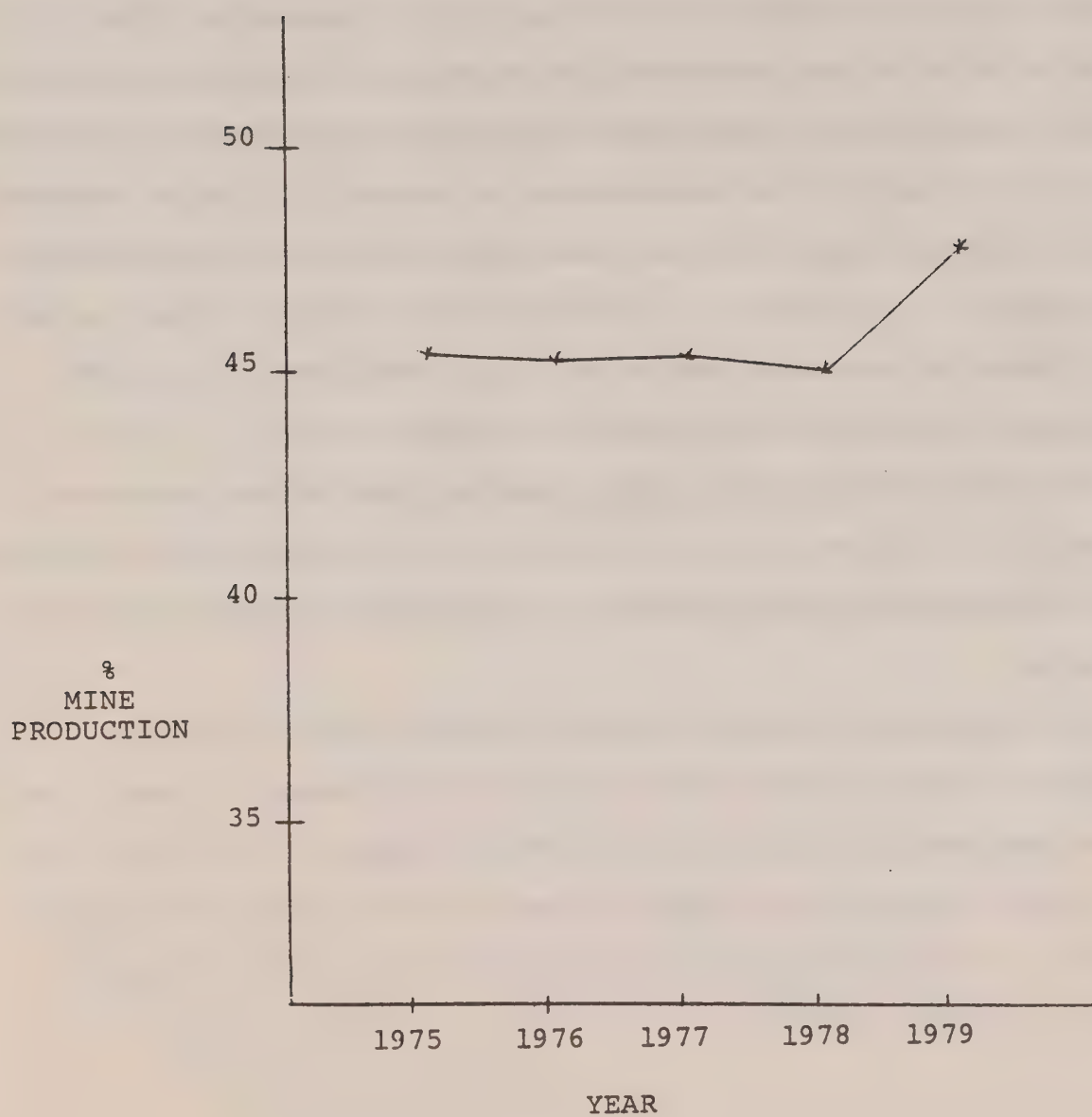


TABLE 14

PERCENTAGE WORLD MINE  
PRODUCTION - PLATINUM  
SOUTH AFRICA





Australia:

Australia is a major producer of copper, gold, iron ore, lead, nickel, platinum and silver.

Australia continues to be one of Canada's most formidable competitors in the search for foreign investment. It is one of the most politically stable countries in the world and does not suffer from the threat of secession as does Canada.

The mineral industry is a healthy one in Australia. The Sydney Index of minerals and metals increased by sixty-nine percent in 1979. The New York Times reported a \$17 billion dollar investment in the mining industry of the country on January 19. This involved five new aluminum smelters, new coal mines and three uranium mine developments. On January 16, Prime Minister Ohira of Japan called for a growth in co-operation between Japan and Australia in the development of Australia's natural resources.

In 1979, the Financial Times reported that BP was investing \$1.5 billion to develop, in co-operation with an Australian company, copper, uranium and gold deposits in the Roxby Downs area of South Australia.

This impressive record does not contain some of the more problematic factors which affect mineral development in Australia. In his presidential address to the ANZAAS Congress on 14 May 1980, A.H. Parbo indicates that some of these include the lack of large Australian mining companies and the imposition of environmental protection regulations.

Recently, the aborigines called for a halt to all mineral exploration for three years on aboriginal lands. They expressed particular concern for land which is sacred to them. Thus far, the government has expressed little sympathy with this position.

The government is taking an increasingly interventionist role however. New mineral export regulations were introduced in 1978. They involved government supervision of mineral exporters' negotiations regarding pricing, duration and tonnage for minerals such as coal, iron ore, bauxite and aluminum. The March 26, 1979 issue of the Journal of Commerce reported that the government is in favour of additional processing of minerals within Australia and is actively considering a number of policy options in that regard.

Although the BERI rating places Australia five positions lower than Canada,<sup>31</sup> I suspect that Australia will pose a stiff challenge to Canada for investment in the mineral industry. This is particularly true because of the decline of copper production in Japan and the proximity of Australian deposits to the Japanese industrial core.

TABLE 15

PERCENTAGE WORLD MINE

PRODUCTION - COPPER

AUSTRALIA

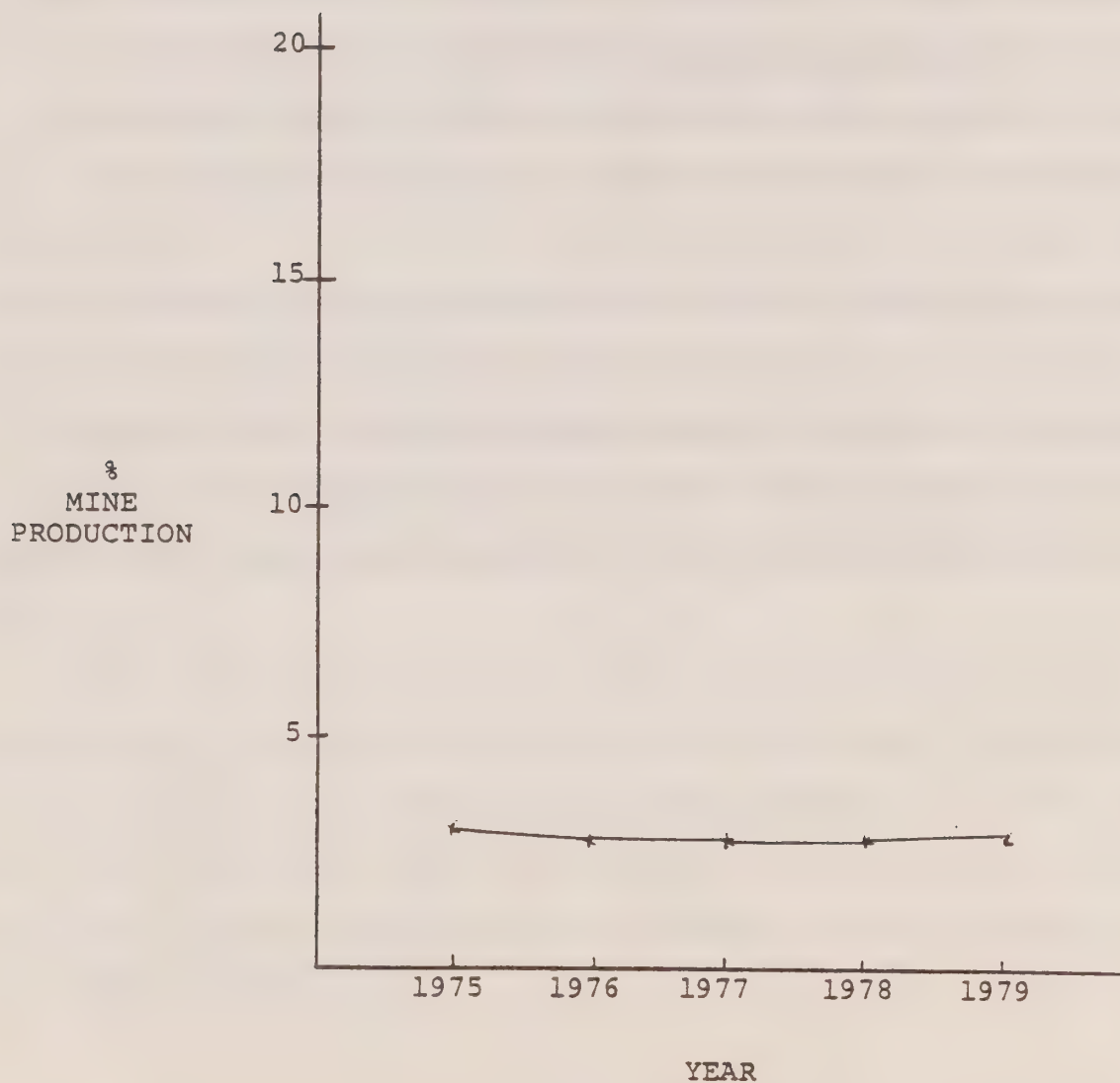


TABLE 16

PERCENTAGE WORLD MINE

PRODUCTION - GOLD

AUSTRALIA

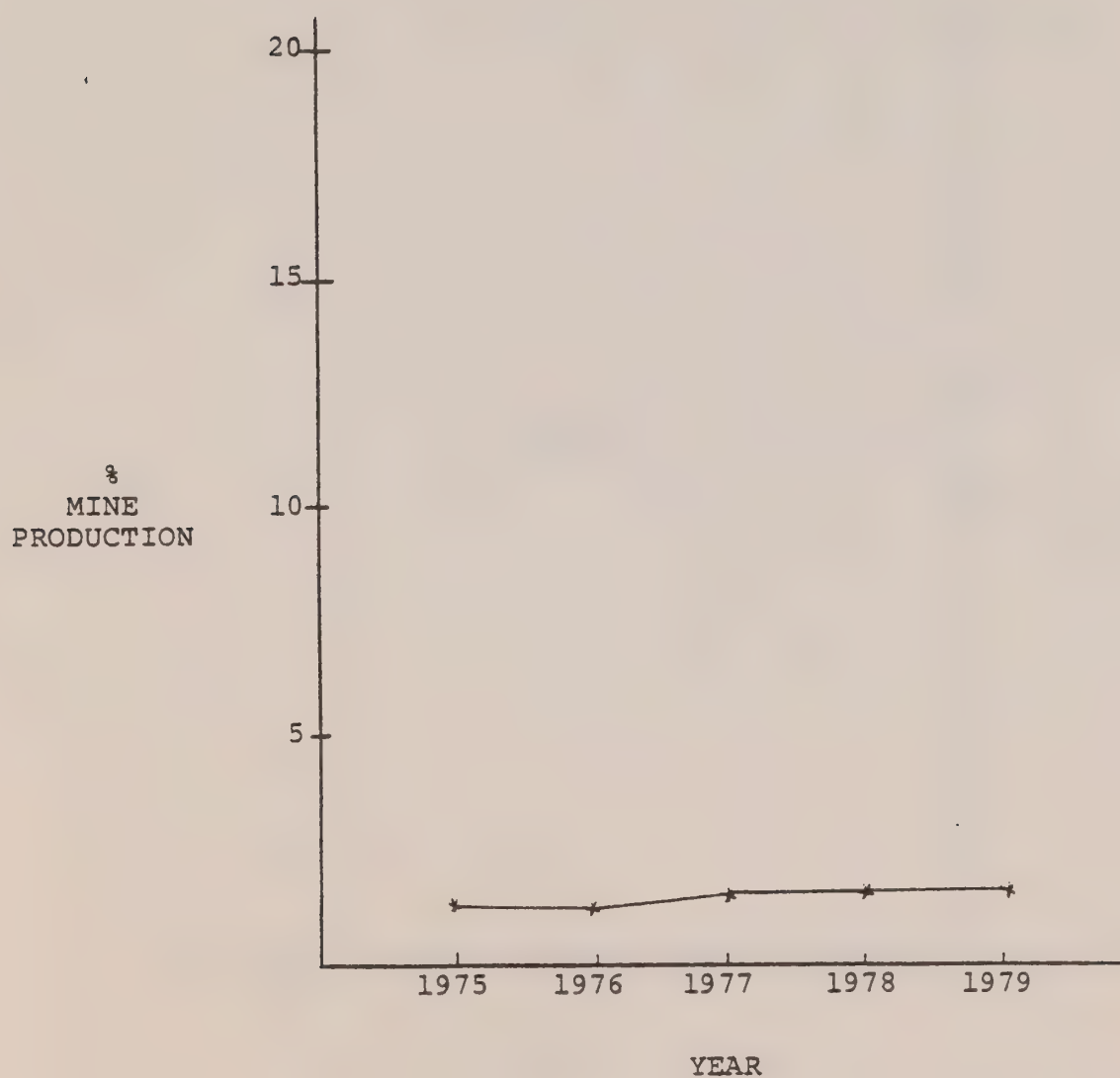




TABLE 17

PERCENTAGE WORLD MINE  
PRODUCTION - IRON ORE  
AUSTRALIA

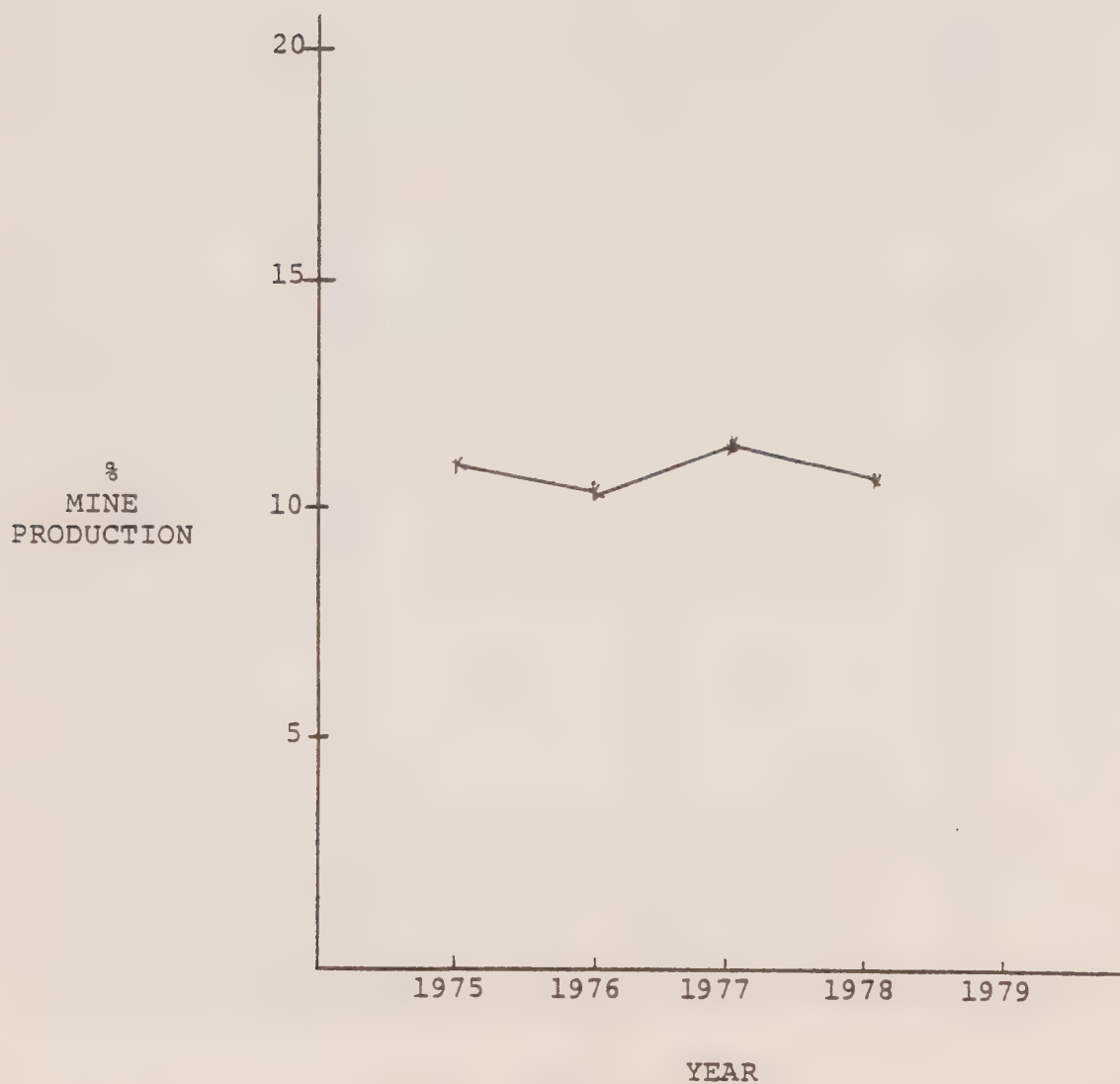


TABLE 18

PERCENTAGE WORLD MINE

PRODUCTION - LEAD

AUSTRALIA

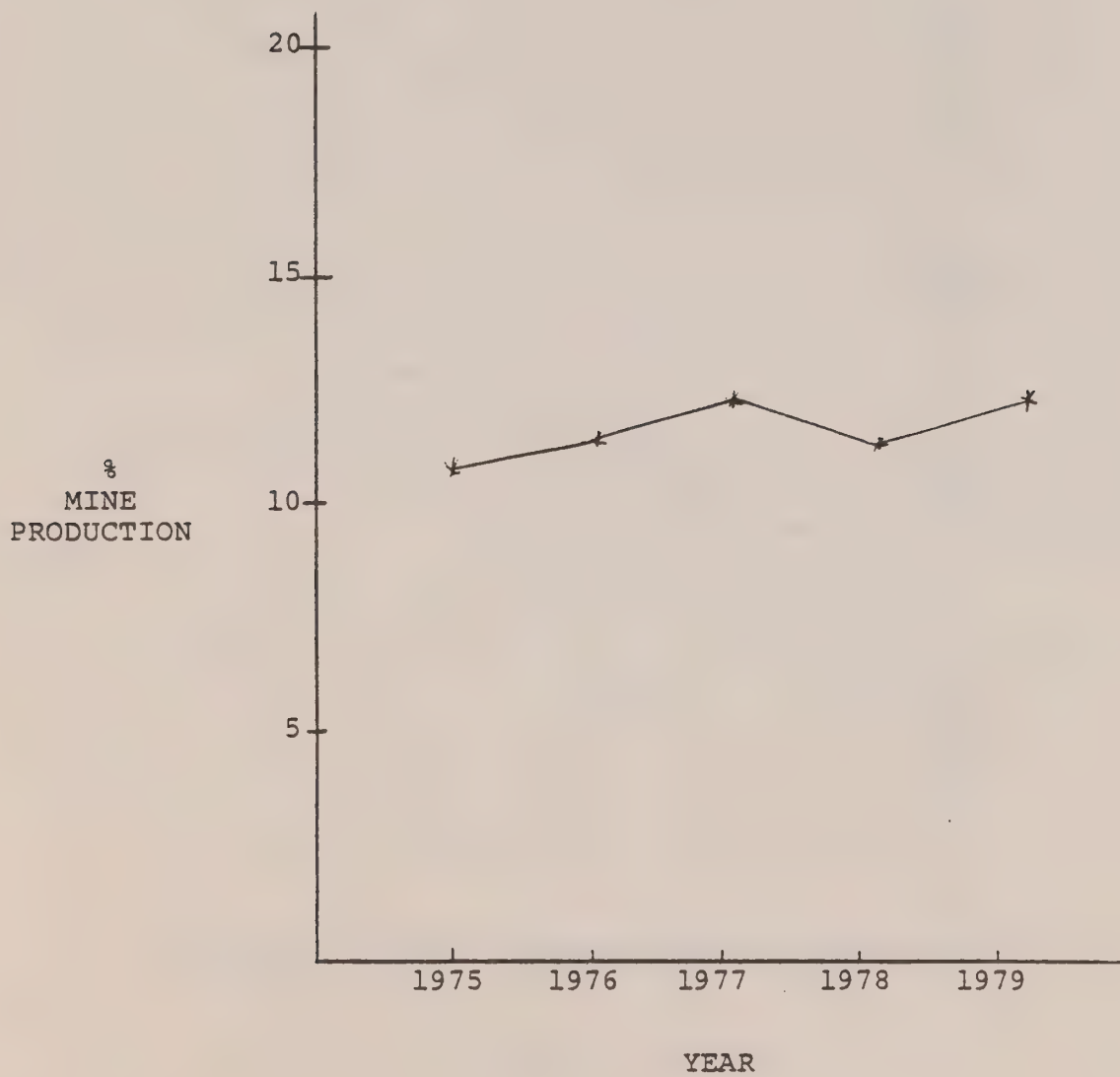


TABLE 19

PERCENTAGE WORLD MINE

PRODUCTION - NICKEL

AUSTRALIA

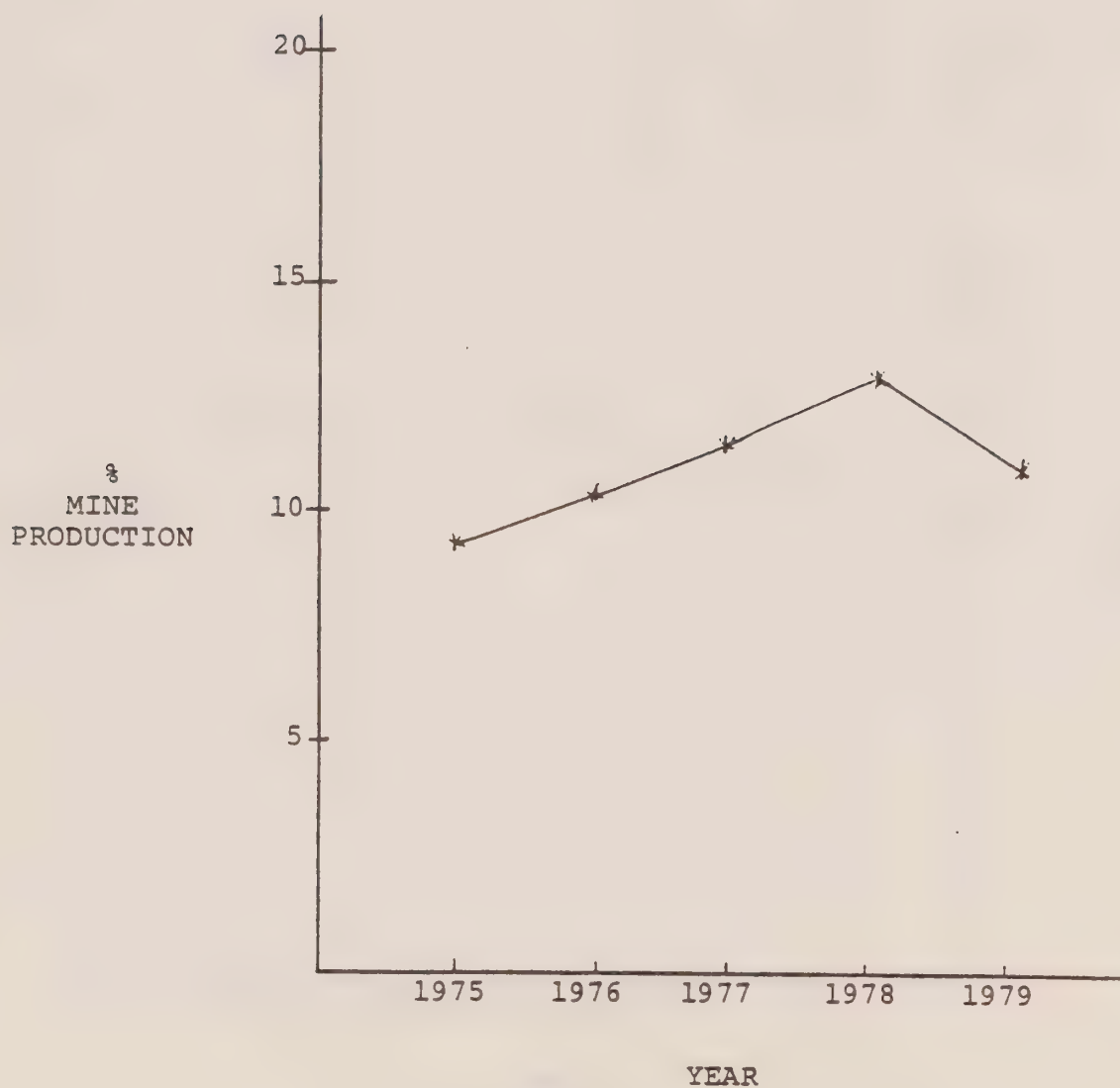


TABLE 20

PERCENTAGE WORLD MINE  
PRODUCTION - PLATINUM

AUSTRALIA

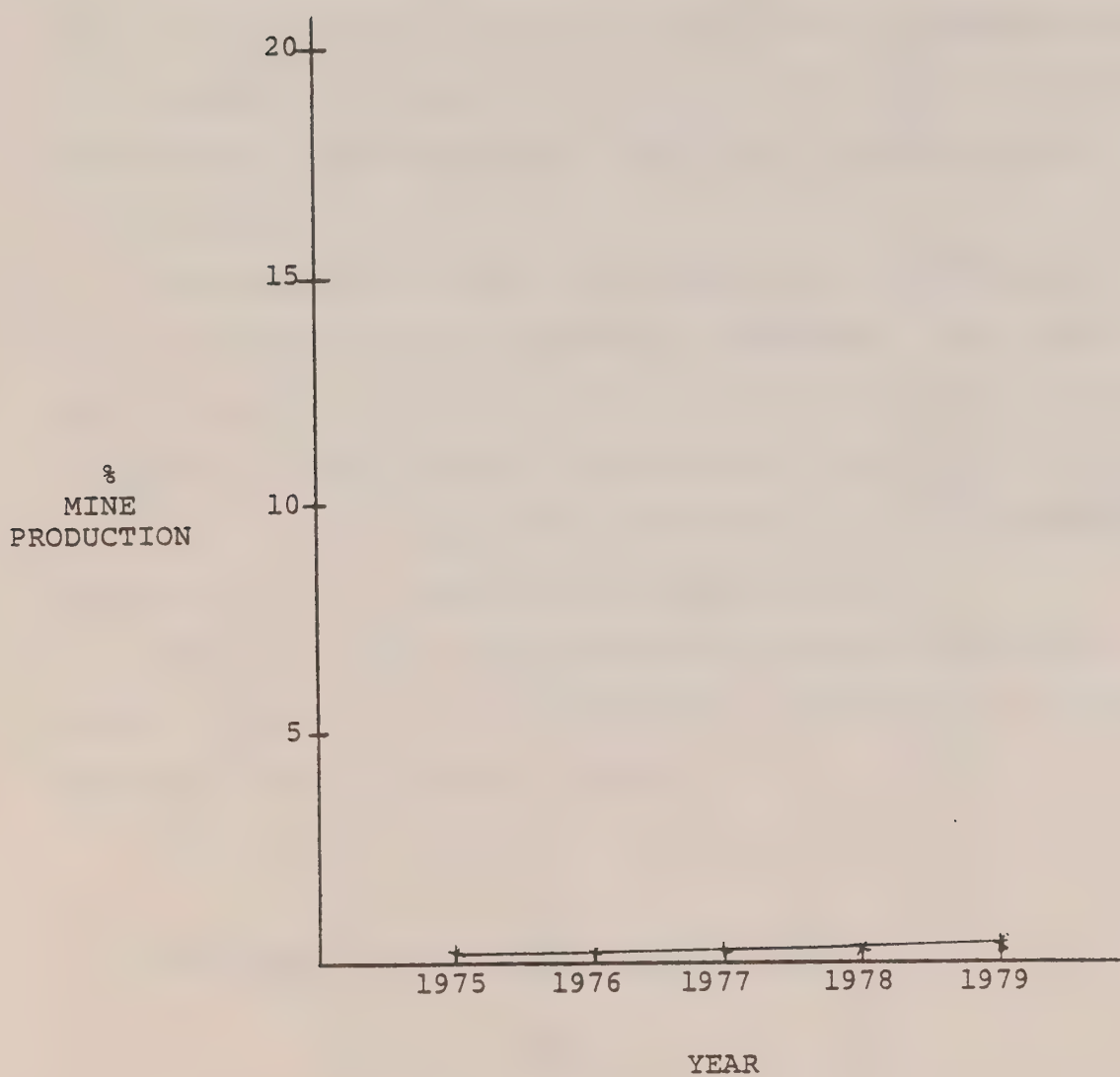


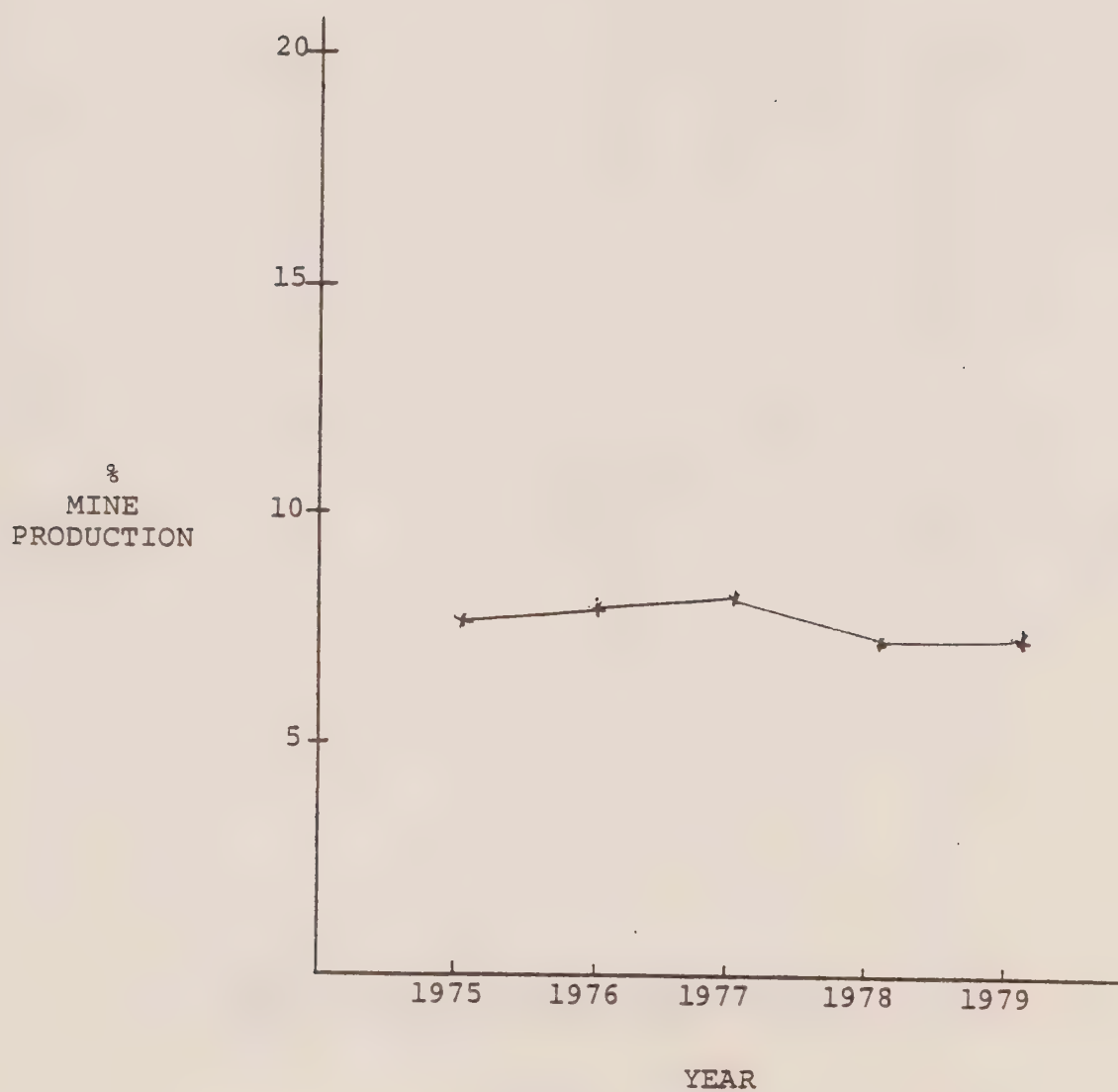


TABLE 21

PERCENTAGE WORLD MINE

PRODUCTION - SILVER

AUSTRALIA



U.S.A.:

The U.S. is a major producer of copper, gold, iron ore, lead, silver, platinum and zinc.

The U.S. remains one of the most attractive investment areas. BERI rates it three positions above Canada.<sup>32</sup>

The major difficulty involves the depletion of high yield reserves. Considerable exploration is likely to be required at considerable expense.

Insofar as the U.S. is concerned, one scenario needs consideration. If the recent polls hold and if the U.S. economy continues in recession, it is probable that Mr. Reagan will become President. Traditionally, the Republicans have been more protectionist than the Democrats.<sup>33</sup>

The possibility exists, therefore, for a re-introduction of DISC type proposals by a Republican President. This would encourage and provide incentives for U.S. multi-nationals to divest themselves of many foreign activities and increase investment in the U.S. In this fashion the availability of U.S. funds for investment in Canada might be seriously curtailed.

Although Canada does possess some resource advantages, I suspect that the U.S. will continue to be viewed as a better investment risk in the near future.

TABLE 22

PERCENTAGE WORLD MINE

PRODUCTION - COPPER

U.S.A.

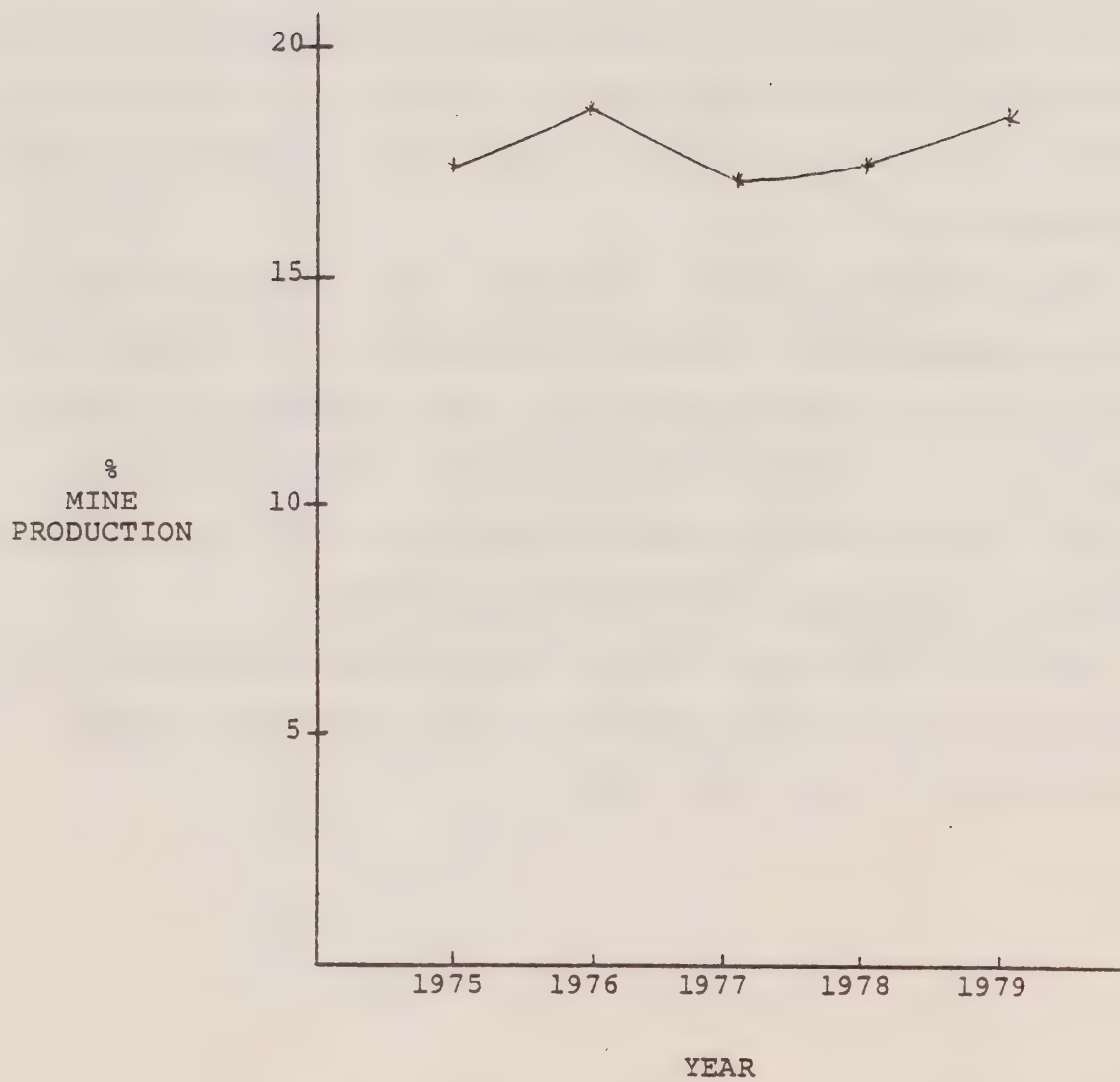


TABLE 23

PERCENTAGE WORLD MINE

PRODUCTION - GOLD

U.S.A.

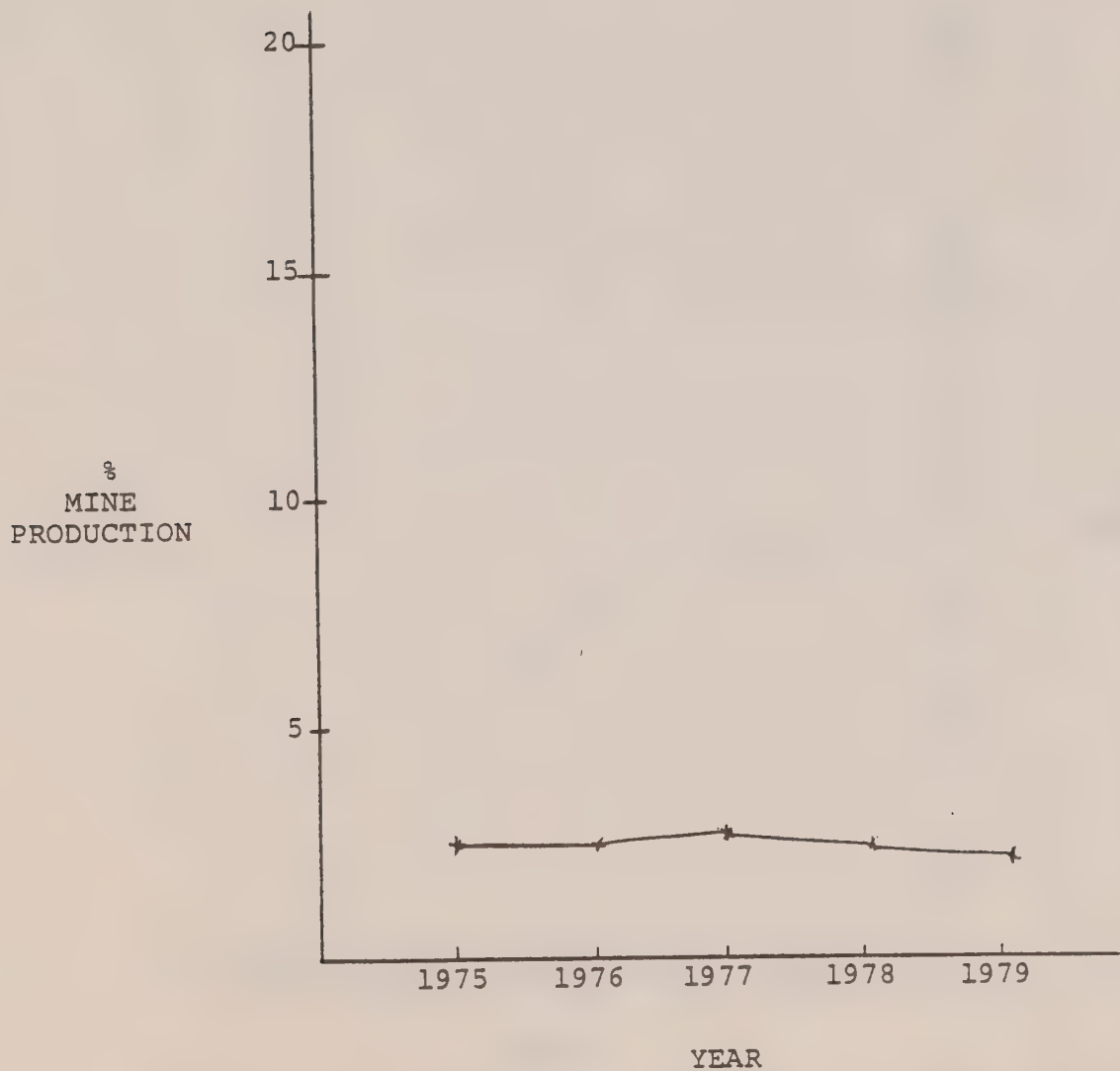




TABLE 24

PERCENTAGE WORLD MINE  
PRODUCTION - IRON ORE  
U.S.A.

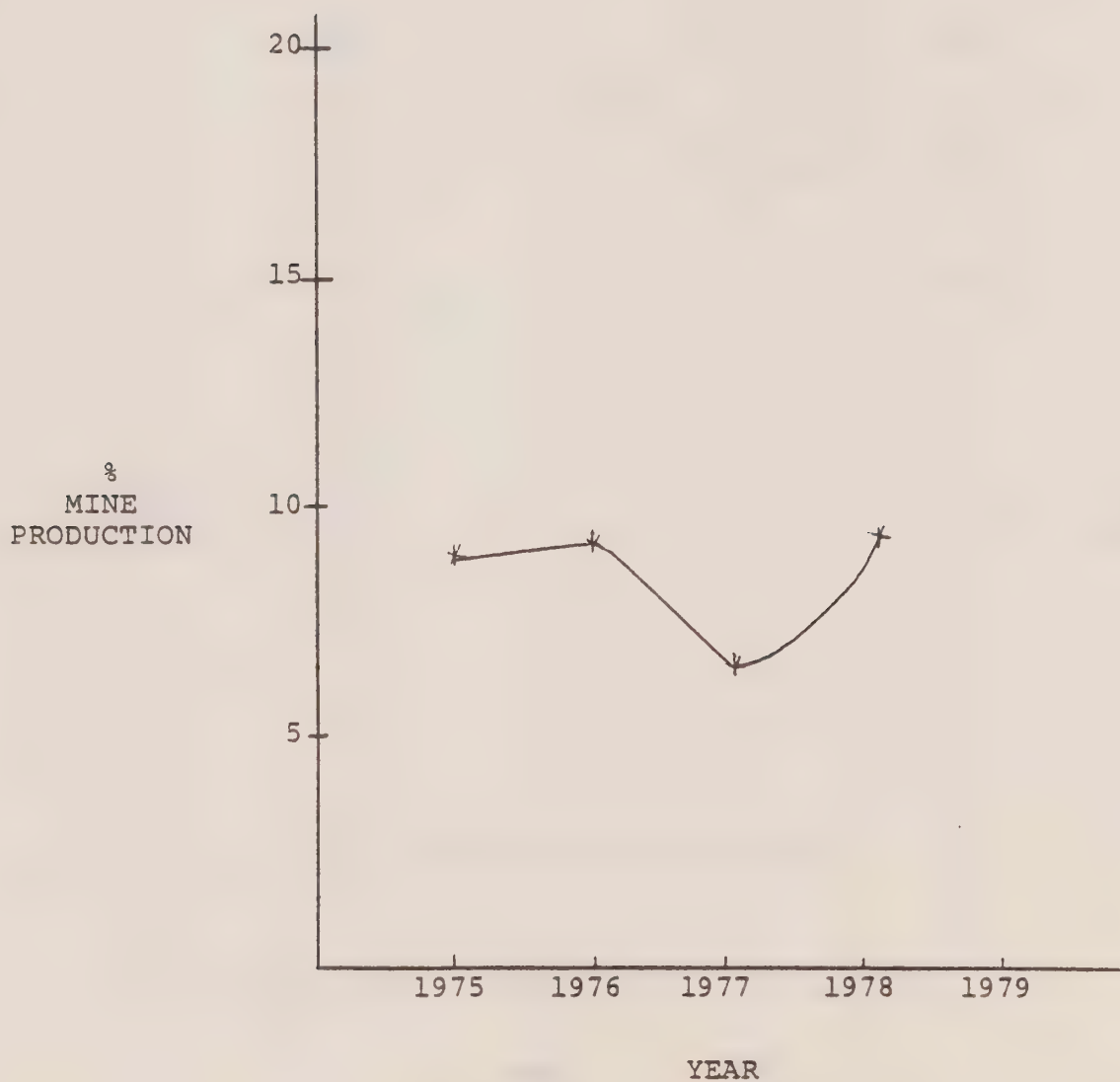


TABLE 25

PERCENTAGE WORLD MINE  
PRODUCTION - LEAD  
U.S.A.

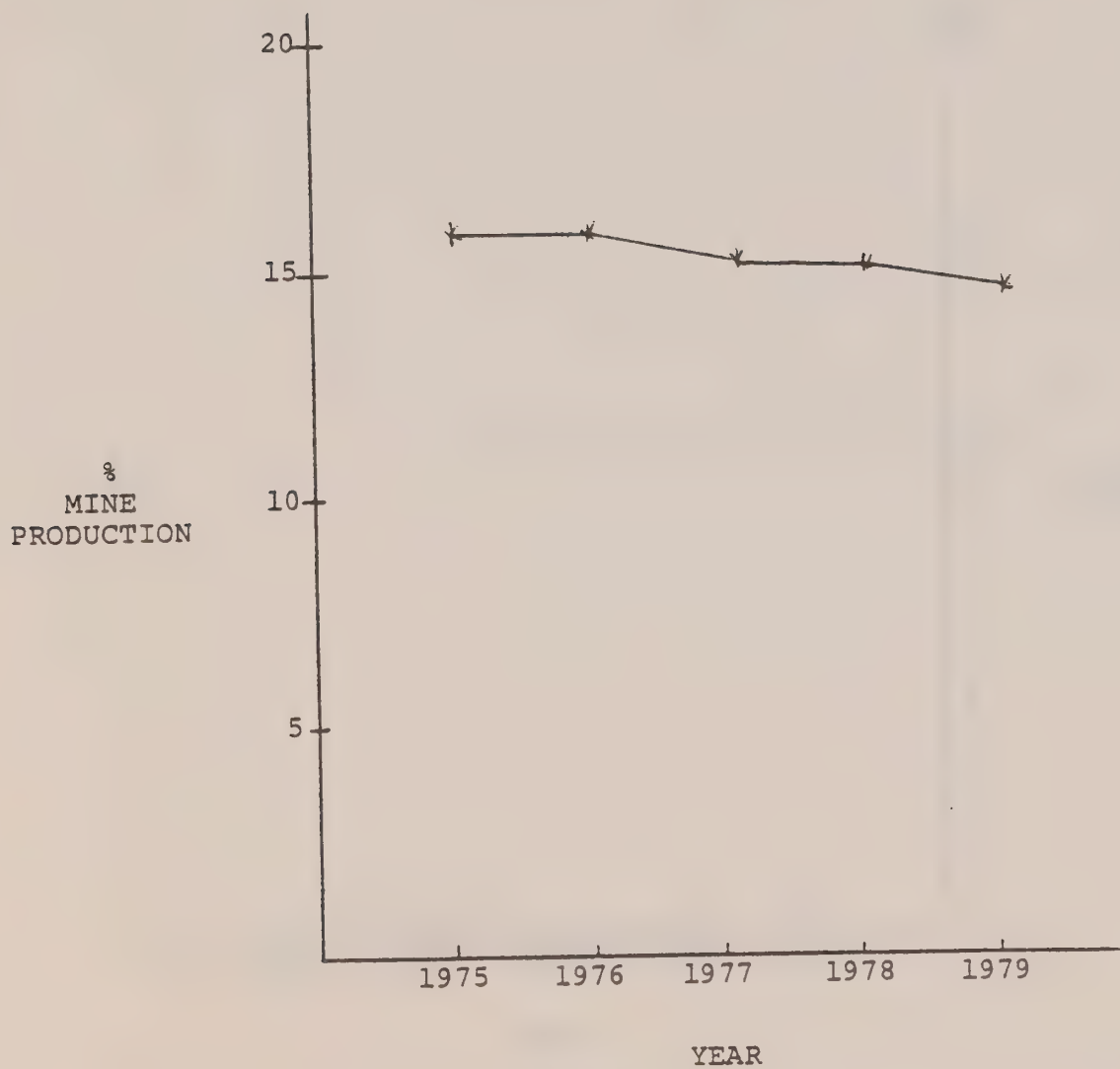


TABLE 26

PERCENTAGE WORLD MINE  
PRODUCTION - PLATINUM

U.S.A.

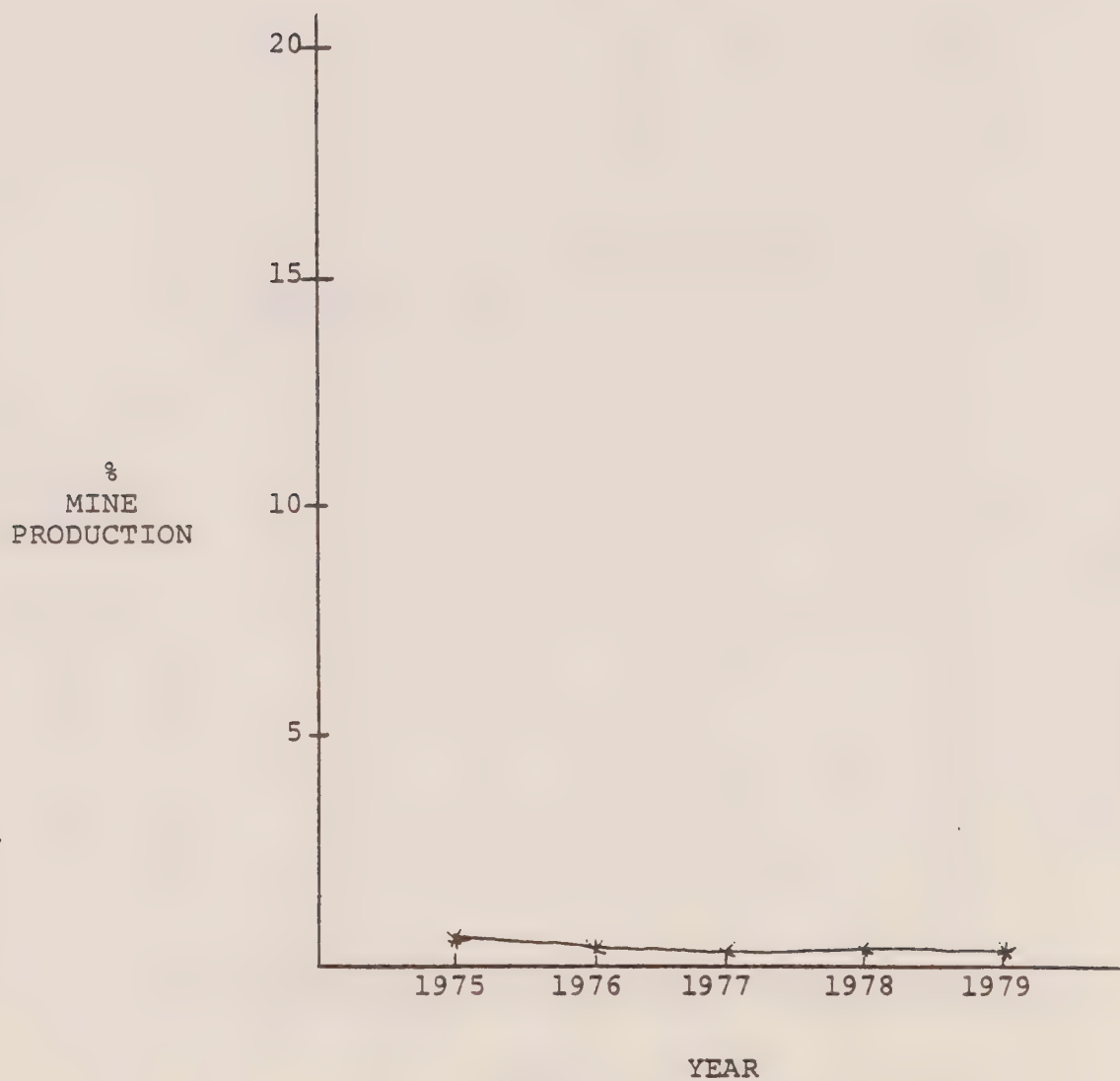


TABLE 27

PERCENTAGE WORLD MINE

PRODUCTION - SILVER

U.S.A.

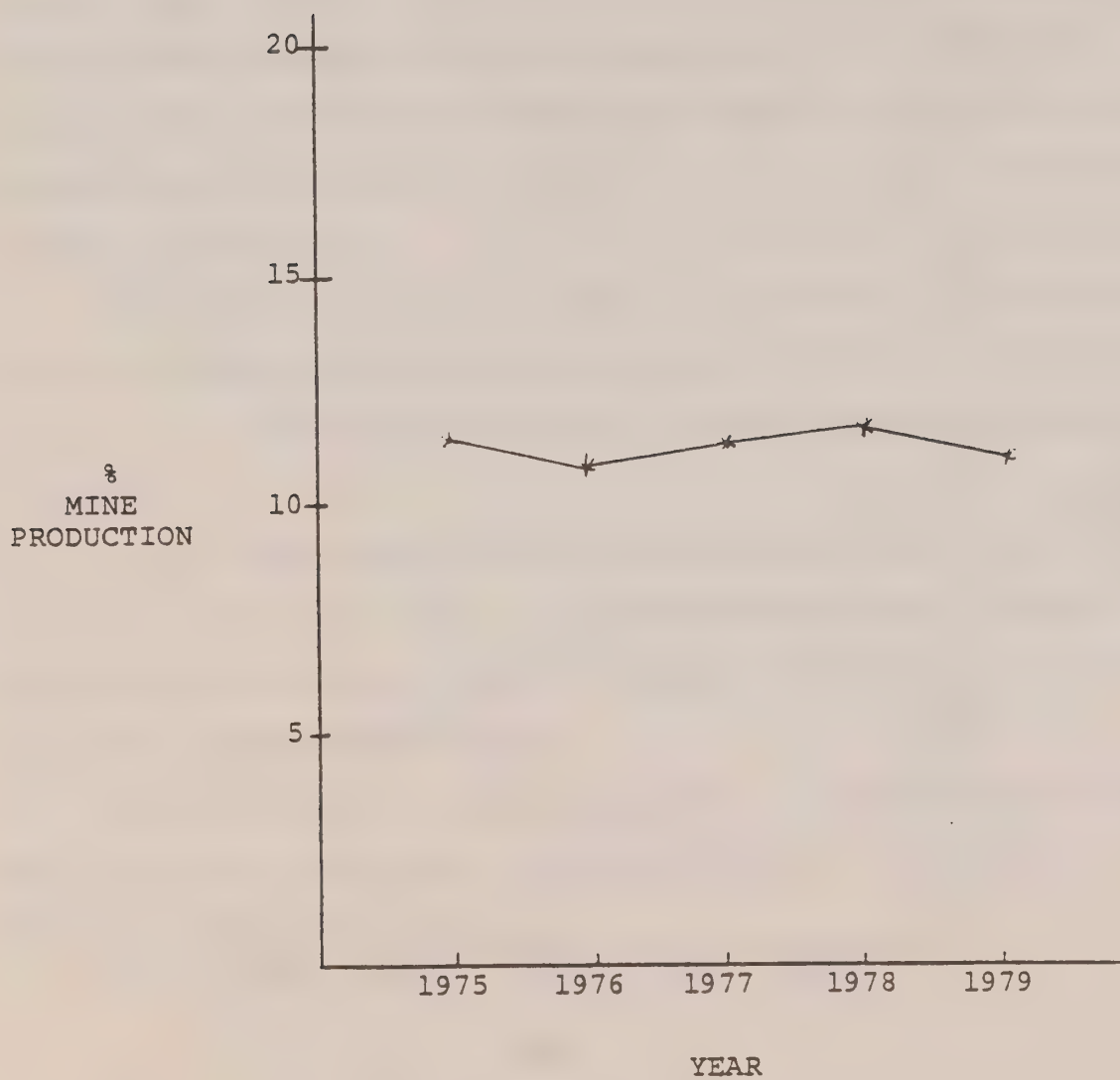
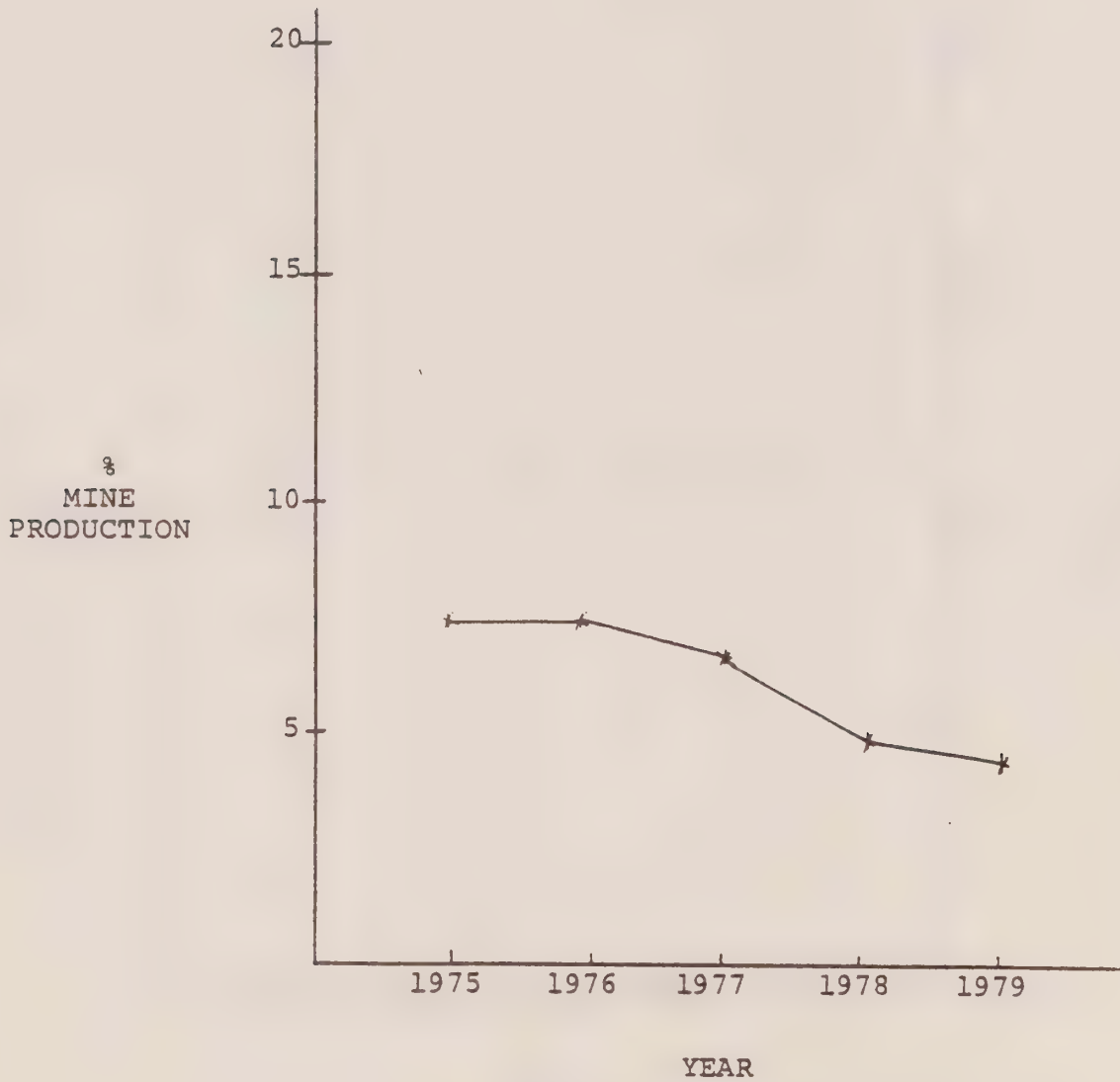


TABLE 28

PERCENTAGE WORLD MINE

PRODUCTION - ZINC

U.S.A.





Morocco:

Morocco is a major producer of lead.

In 1979 U.S. intelligence reports suggested that King Hassan would be overthrown. By February 1980 it was apparent that "the intelligence forecast can, for the time being, be discarded."<sup>34</sup>

King Hassan, an absolute ruler, has consolidated his position. He has re-equipped his army and sent them on the offensive against the Algerian-backed Polisario guerillas in an attempt to gain control of the Western Sahara. Although he cannot win, King Hassan argued that Moroccan sovereignty is not negotiable. It is probable that this military cat and mouse game will continue for some time. Indeed, Algeria recently blamed Morocco for stirring up Berber unrest in Algeria.

The Moroccan economy is basically unhealthy. The Moroccan army continues its action only because of financial aid from Saudi Arabia. In 1979 strikes erupted in protest against economic conditions.

Of the five indices which provide both Canadian and Moroccan rankings, all place Canada in a much more attractive ranking.<sup>35</sup> The Frost and Sullivan forecast assigns a medium level risk of political upheaval in Morocco.

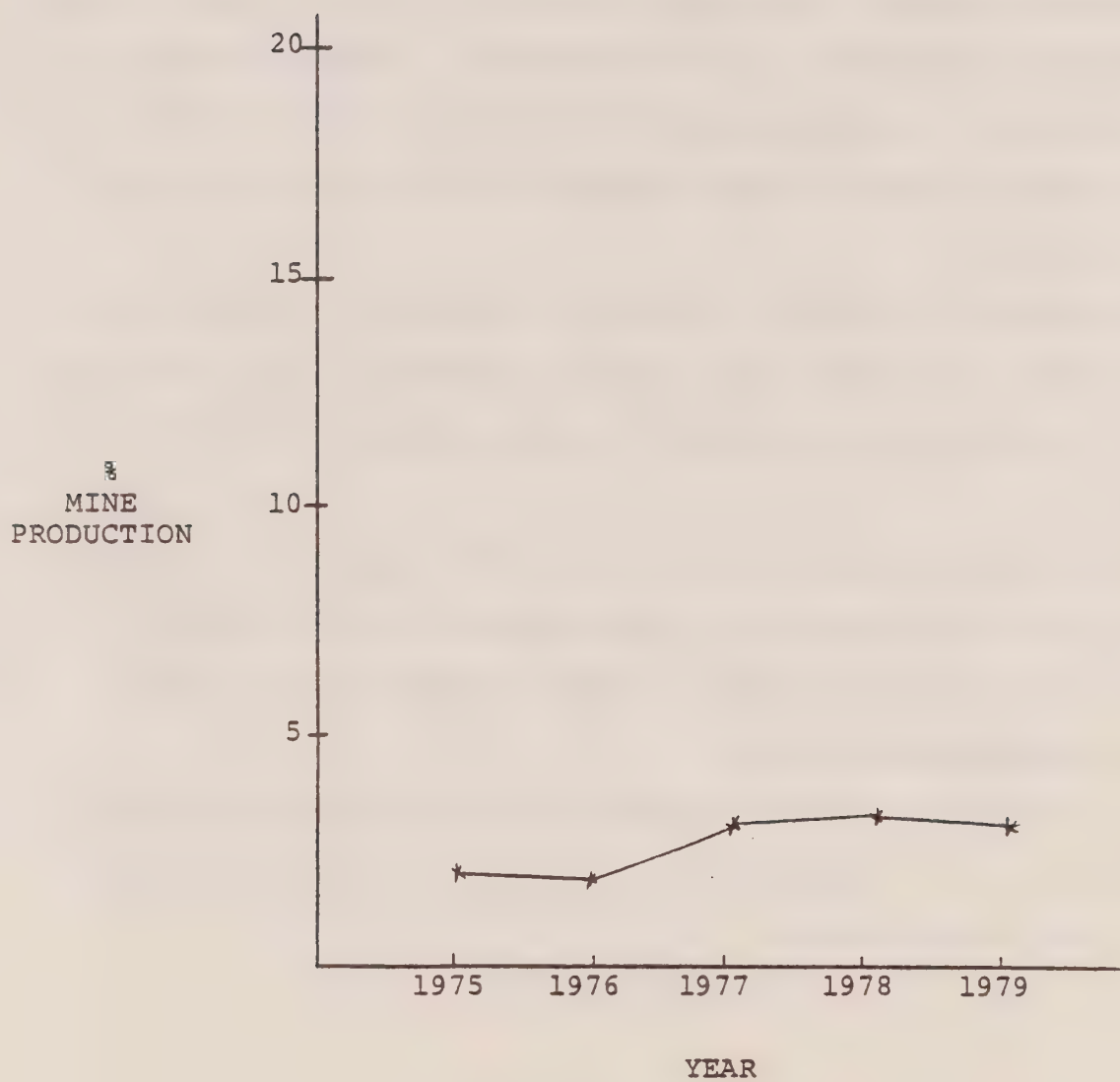
On this basis, it seems reasonable to conclude that Canada will continue to be a more attractive area for investment than Morocco in the near future.

TABLE 29

PERCENTAGE WORLD MINE

PRODUCTION - LEAD

MOROCCO



Ghana:

Ghana is a major producer of gold.

During the spring and summer of 1979 Ghana was hit by four months of violent military revolution. The Economist described this as one of "the succession of coups that has marked Ghana's short history as an independent nation".<sup>36</sup>

The new President, Mr. Lemann, is faced with an abysmal economic situation. Although gold prices are rising, Ghana's production was 20% down from its 1978 levels. "Cocoa, the mainstay of the economy is not expected to yield spectacular increases in production despite the recent long-overdue 50% increase in the price paid to the farmer."<sup>37</sup>

Two months earlier, the Economist hinted at an ecological disaster which might result if farmers continued to cut down cocoa trees and forests in order to plant subsistence crops. If such a pattern were to continue, "within 10 years some of Ghana's most productive agricultural land could become a dense red clay, good only for making bricks."<sup>38</sup>

Only one of the risk indices provides rankings for both Canada and Ghana.<sup>39</sup> The Japanese rank Canada 57 places above Ghana.

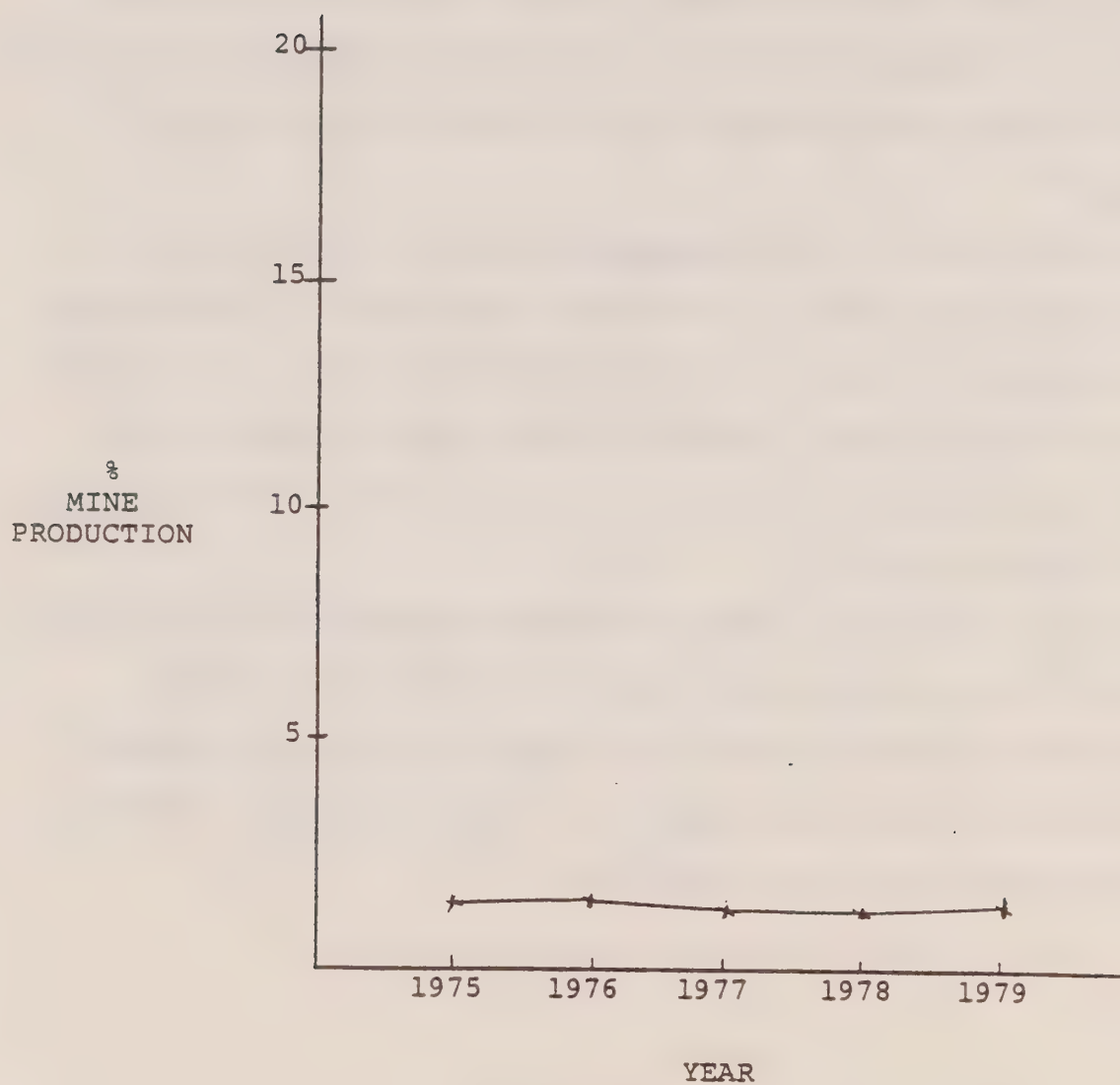
Given the history of political instability and the weakness of its economy, Ghana is unlikely to be viewed as a more attractive investment opportunity than Canada.

TABLE 30

PERCENTAGE WORLD MINE

PRODUCTION - GOLD

GHANA



Brazil:

Brazil is a major producer of iron ore.

In the past Brazil has been viewed as one of the most secure investment locations in South America. This was partly due to the strong economic growth from 1964 onwards. The Economist reported that GNP "trebled since 1964."<sup>40</sup>

Unfortunately, President Figueiredo, who assumed office on March 15, 1979, now faces a much less optimistic economic future. The Banker reports an inflation rate of 77% in 1979.<sup>41</sup> The trade deficit for 1979 amounts to over \$2 billion and Brazilian currency has been devalued by 93% in the same year.

Although President Figueiredo announced his desire to move towards democracy, most observers feel that this will be a rather slow process. Internal opposition in the form of urban guerilla movements has not been too widespread. Although strikes by dockworkers and metalworkers earlier this year involved some violence, the government intervened quickly with troops to end the disputes.

The Economist Survey does suggest that a credit squeeze policy as part of an inflation-fighting economic policy could bring on "explosive" reaction from trade unions. The same report also notes that Brazil's relations with both Argentina and the U.S. are worsening.<sup>42</sup>

Insofar as foreign investment is concerned, the Brazilian government appears to be moving in a more interventionist direction. On October 1, 1979, new rules were introduced to prevent multinationals from developing dominance in the manufacturing sector. Increasingly, joint ventures have become the preferred mechanism for

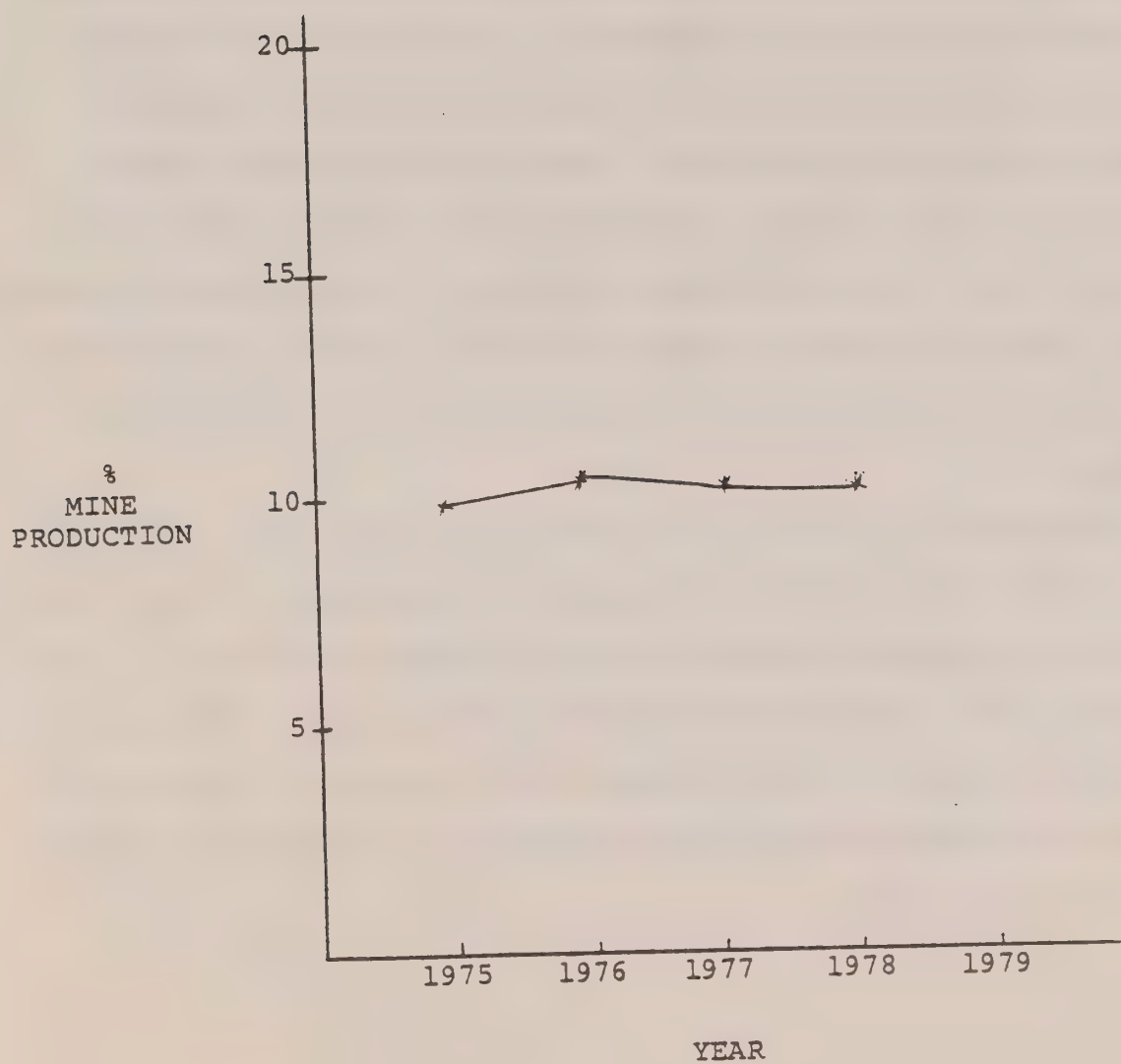


investment. The Financial Times reported on August 3, 1979, that Spain and Brazil had agreed to jointly develop the production of iron ore pellets in Brazil.

All five of the risk indices summarised in Appendix B indicate less confidence in Brazil than in Canada. In addition, the Institutional Investor Rankings show a drop in rank for Brazil of 10 places from 1979 to 1980.<sup>43</sup>

On this basis, it would appear that Canada will continue to be a more attractive investment than Brazil for the foreseeable future.

TABLE 31  
PERCENTAGE WORLD MINE  
PRODUCTION - IRON ORE  
BRAZIL



The Philippines:

The Philippines is a major producer of nickel and gold.

The current political situation in the Philippines is not a good one. One Hong Kong banker states that "in terms of the political and social situation, the Philippines is the most volatile country in south east Asia."<sup>44</sup>

This statement is supported by evidence of increased violence inside the country in 1980. The bribery and intimidation tactics used by President Marcos during the January 1980 local elections, were condemned strongly by opponents. In February, four opposition political groups united to attempt to overthrow President Marcos and his martial law rule. Moslem guerillas were active in Mindanao cities and were responsible for several bombings and killings in the area in February and March. The government arrested a large number of freedom marchers on July 4, 1980. In October an international travel agents' conference in Manila was bombed by terrorists.

The economic picture is not much more reassuring. The Banker reports that external debt has reached \$9 billion by 1979 and that inflation was reaching levels of 16-17% by the end of 1979.<sup>45</sup> A Union Bank survey which was released on February 12, 1980, indicates that a worker in Manila would have to work for 500 hours to purchase the same goods as those purchased by a worker in Chicago after 82 working hours.

The five indices which report on both Canada and the Philippines all agree that the Philippines is a less secure investment area than Canada. The Frost and Sullivan risk forecast describes the Philippines as a high risk country.<sup>46</sup>

Given this evidence, it appears to be logical to conclude that the Philippines will not be a major competitor of Canada in the search for investment capital in the near future.

TABLE 32

PERCENTAGE WORLD MINE

PRODUCTION - GOLD

PHILIPPINES

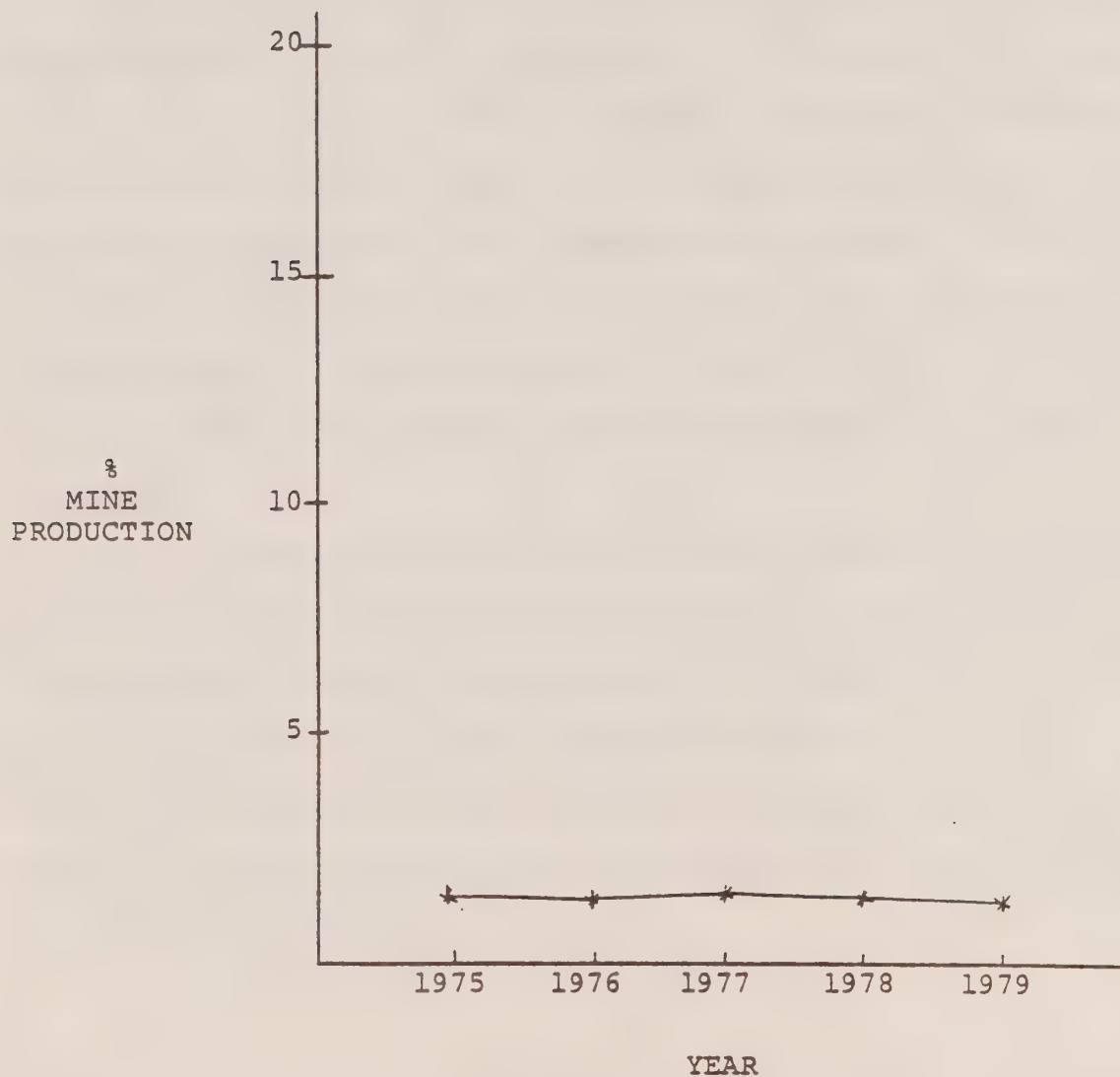
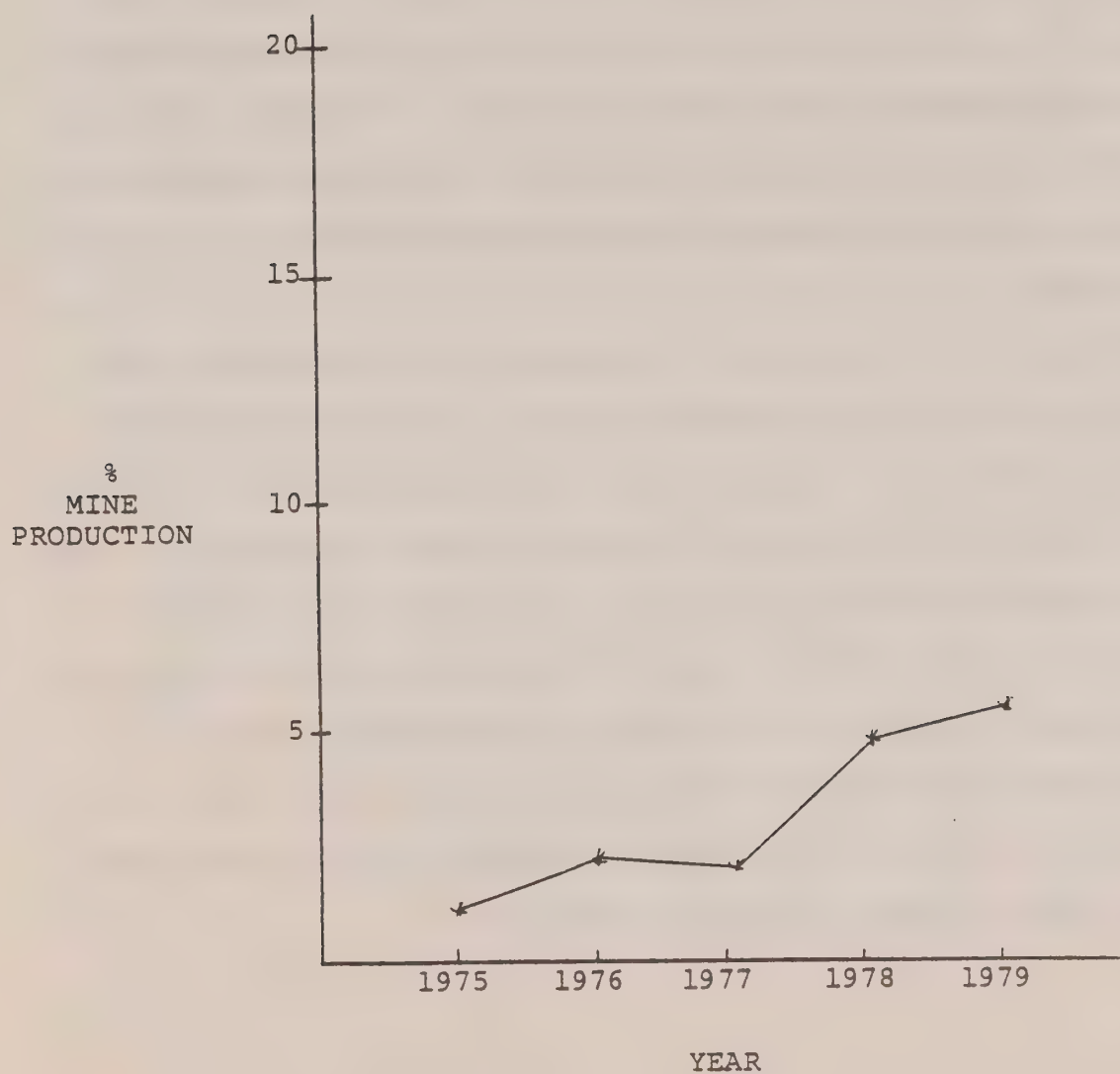




TABLE 33  
 PERCENTAGE WORLD MINE  
 PRODUCTION - NICKEL  
 PHILIPPINES



Rhodesia (Zimbabwe):

Rhodesia is a major producer of nickel and gold.

The success of Mr. Robert Mugabe in achieving majority support augurs well for the future of the country. Despite this, no clear consensus has emerged about the probable future of the country in recent discussions of the subject.

Politically, a number of questions remain unresolved. Mr. Nkomo, a senior member of the new cabinet, has expressed increased dissatisfaction with his influence in the new government. In addition, it is possible that the left wing of the ruling party may re-assert itself in the future. Indeed, on July 23, 1980, the government declared a state of emergency to last for six months because of the activities of dissident armed guerillas in the countryside.

Although the country has a reasonably well developed infrastructure and an efficient administration, the economy suffered drastically from the ravages of war. Enormous amounts of capital will be needed to rebuild and this has not been forthcoming. The U.S. has promised \$15 million in aid. The U.K. has developed an aid package of \$165 million over the 1981-1983 period. The Banker suggests that \$1.5 billion is needed if "Zimbabwe is going to resettle the people displaced by the war, rebuild its rural infrastructures and schools and provide irrigated land for settlement ... and hope to remain politically stable."<sup>47</sup>

On March 4, Mr. Mugabe indicated that his government was not going to interfere with private property, whether it be farms or whether it be the mining sector or the industrial sector. Basil Caplan expects that "in practice, pressures from radical sectors may well prod the government into taking equity stakes in some sectors such as the mining industry and in banking."<sup>48</sup>

Only the Institutional Investor rankings provide a basis of comparison between Canada and Rhodesia. In 1979 Canada is ranked 78 places ahead of Rhodesia. In 1980 Canada is ranked 75 places ahead of Rhodesia.<sup>49</sup>

My own feeling is that there is so much uncertainty about possible developments in Rhodesia in the near future amongst potential investors, that they will not be likely to make any long-term commitments until future directions become more clear.

TABLE 34

PERCENTAGE WORLD MINE

PRODUCTION - GOLD

RHODESIA

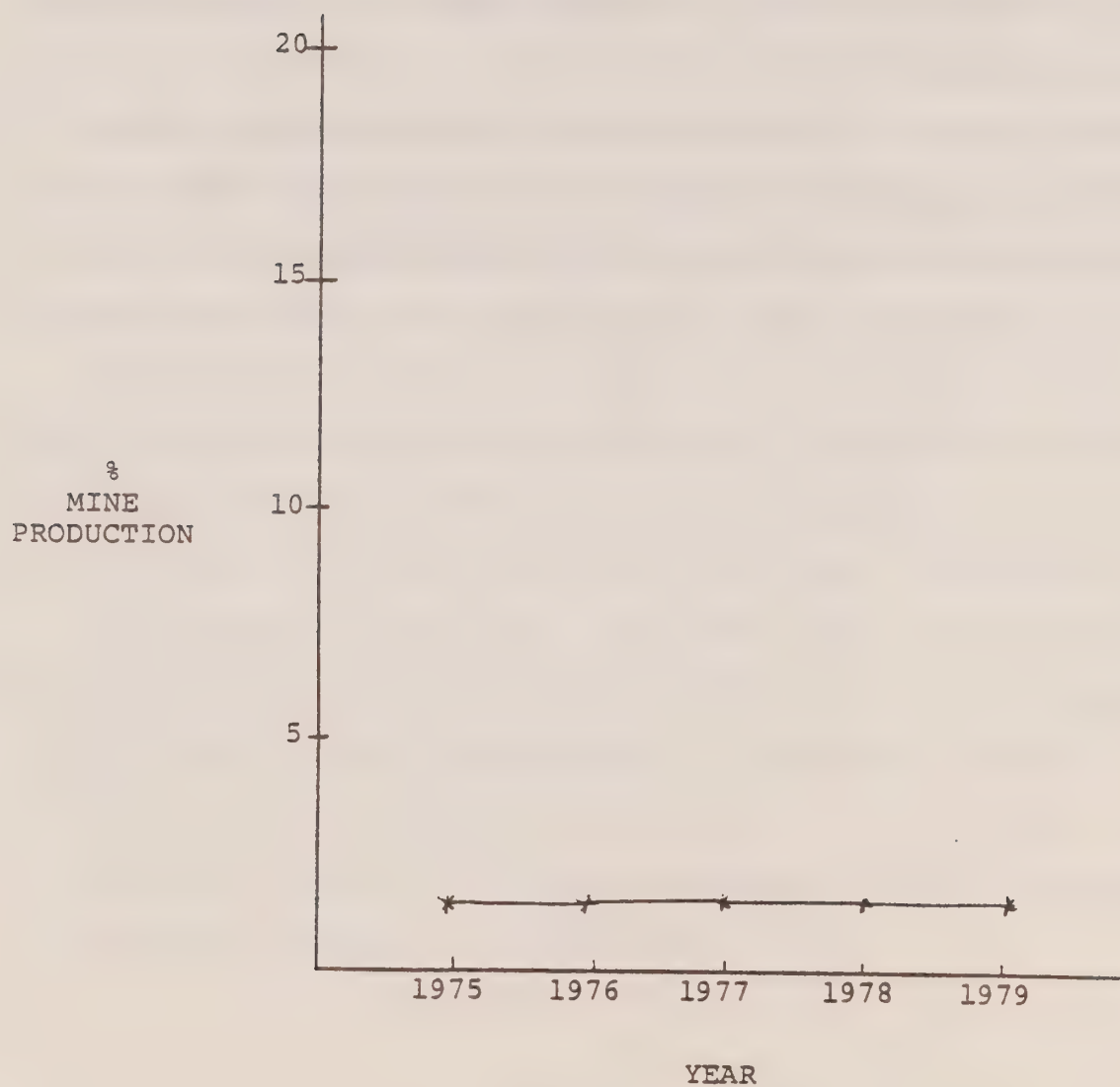
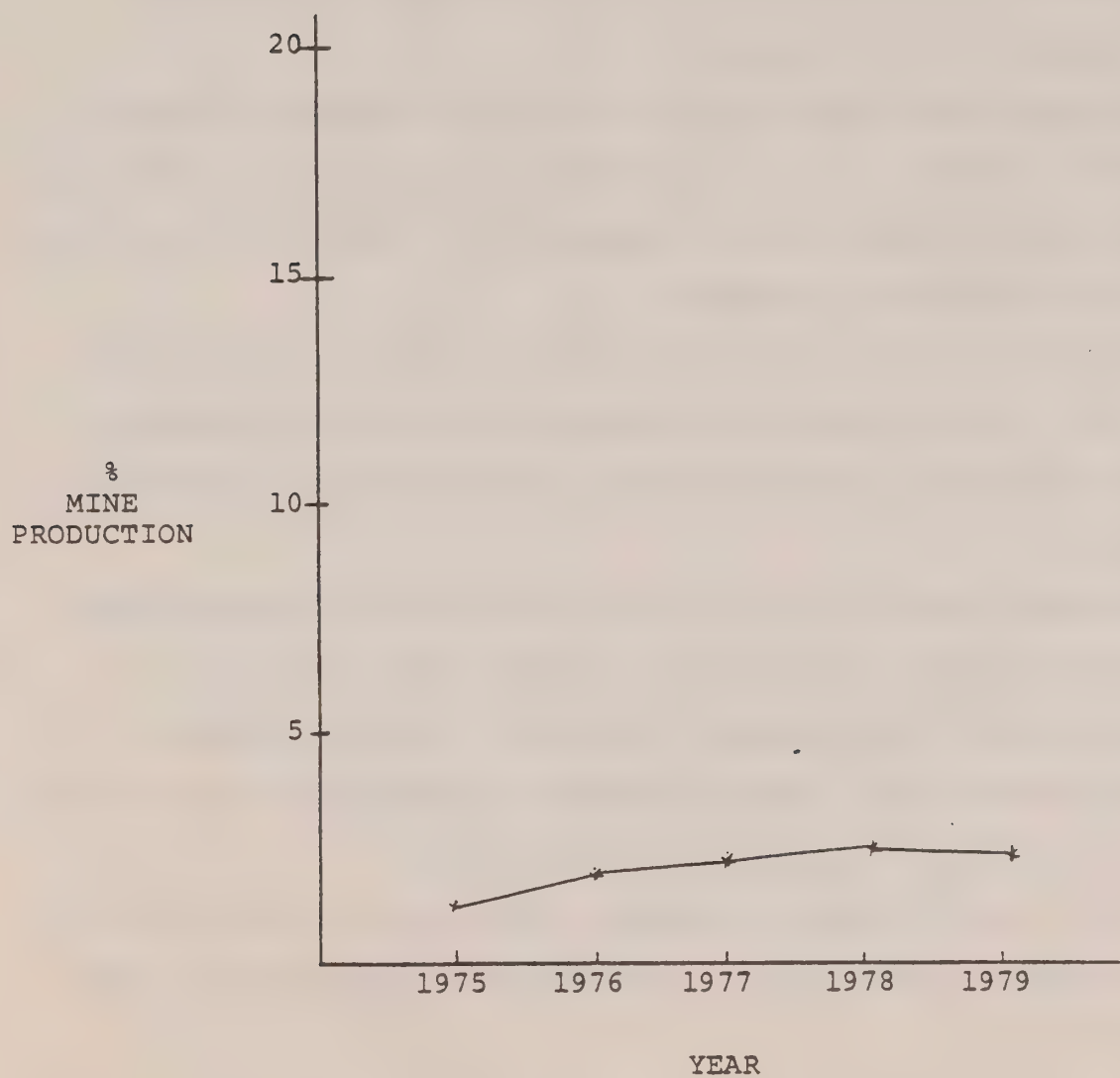


TABLE 35

PERCENTAGE WORLD MINE

PRODUCTION - NICKEL

RHODESIA



Liberia:

Liberia is a major producer of iron ore.

Over the last two years, internal political upheavals have severely reduced the attractiveness of Liberia to potential investors. In April 1979, there were several riots in the capital, Monrovia, which were caused by rising food prices. President Tolbert called for assistance from neighbouring Guinea. These troops were able to quell the rioting. When university students began rioting a short time later, the President responded by shutting down the universities.

In April, 1980 Samuel Doe led a coup and replaced Tolbert as President. Members of the old government were tried and executed. By April 25, President Doe had suspended the constitution and the execution of opponents continued.

The former Vice-President of Liberia fled the country in April 1980. He has begun the creation of a guerilla movement in the Ivory Coast and intends to step up military action against the Doe regime.

Although President Doe has indicated that the new government encourages foreign investment and respects free enterprise and private property, the Economist notes that "foreign investors have been assured that they are welcome to remain, so long as they do not disregard the 'principle of fair play'."<sup>50</sup>

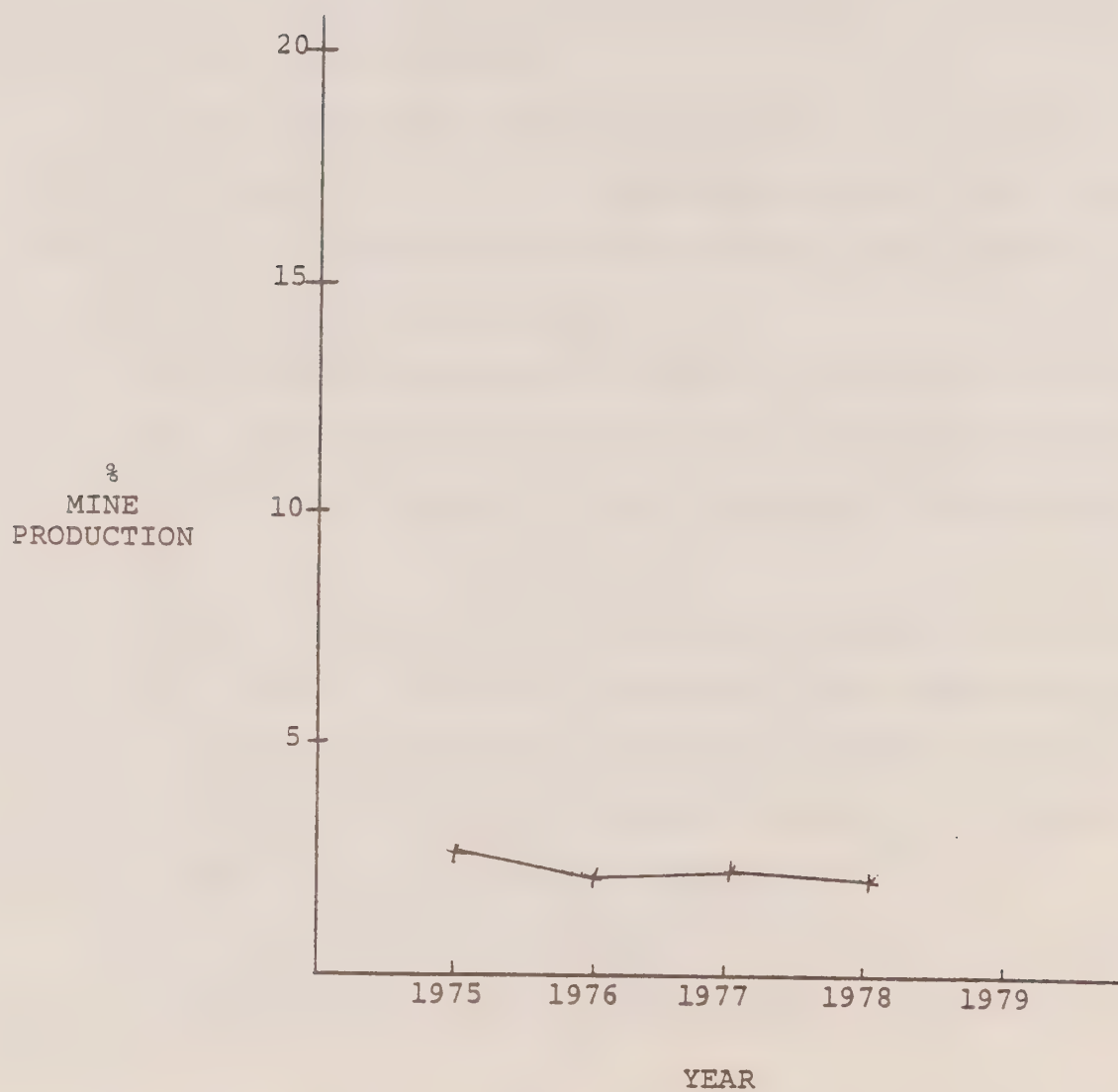
Of the three indices of country risk which provide both Canadian and Liberian rankings, all place Liberia considerably lower in rank.<sup>51</sup>



On this basis it would appear that Liberia is unlikely to be a major competitor of Canada in the search for investment capital.

TABLE 36

PERCENTAGE WORLD MINE  
PRODUCTION - IRON ORE  
LIBERIA



Sweden:

Sweden is a major producer of iron ore, silver and zinc.

Sweden is one of the most politically stable countries in the world. In recent years it has experienced a transition from a democratic socialist government to a liberal democratic coalition government. In terms of foreign policy, Sweden pursues a non-aligned course and her territorial integrity is not threatened by outsiders.

From an economic perspective, the image of Sweden is more mixed. On the one hand the country appears to be quite wealthy. A Union Bank (Zurich) report indicates that in terms of GNP per capita in 1978, Sweden ranked fourth in the world-four steps ahead of the U.S.A. On the other hand, many economists are pointing to weaknesses in the Swedish economy. The budget for the 1981 fiscal year, for example, projects a deficit of \$13.4 billion.

The Economist indicates four major areas of concern:

The country's reputation for quality (which used to help sustain high wages) is now matched or nearly matched, by other countries.

Real rates of investment have dropped.

Productivity growth has been falling since the mid-1960s.

Experiments in improved working conditions have failed to stop excessive absenteeism, now running at 20% in many companies.

Over 40% of exports are accounted for by forest products, shipbuilding, steel and textiles, industries in which it is hard for Sweden's high-wage economy to compete with newly industrialised countries.<sup>52</sup>

The Swedes hope that by concentrating their efforts on high technology, they can improve their economic outlook.

One important fact of life in the Swedish economy is the influence of unions. In the 1970's there has developed "an overt polarisation between employers and unions."<sup>53</sup> In policy terms this is reflected in the co-determination law which went into effect in 1977 and which requires that company decisions be discussed with the labour force at the local level before implementation. More recently, in terms of industrial relations, the union influence has been felt during a strike of some 926,000 workers during several weeks in the spring of 1980.

One of the 5 indices which provide comparative rankings for Canada and Sweden, only one, the Euromoney 1980 survey, gives Sweden a higher ranking than Canada.<sup>54</sup>

Although Canada may be somewhat more attractive to potential investors, it is probable that Sweden will continue to be a strong competitor in the search for mineral development investment funds.

TABLE 37

PERCENTAGE WORLD MINE  
PRODUCTION - IRON ORE  
SWEDEN

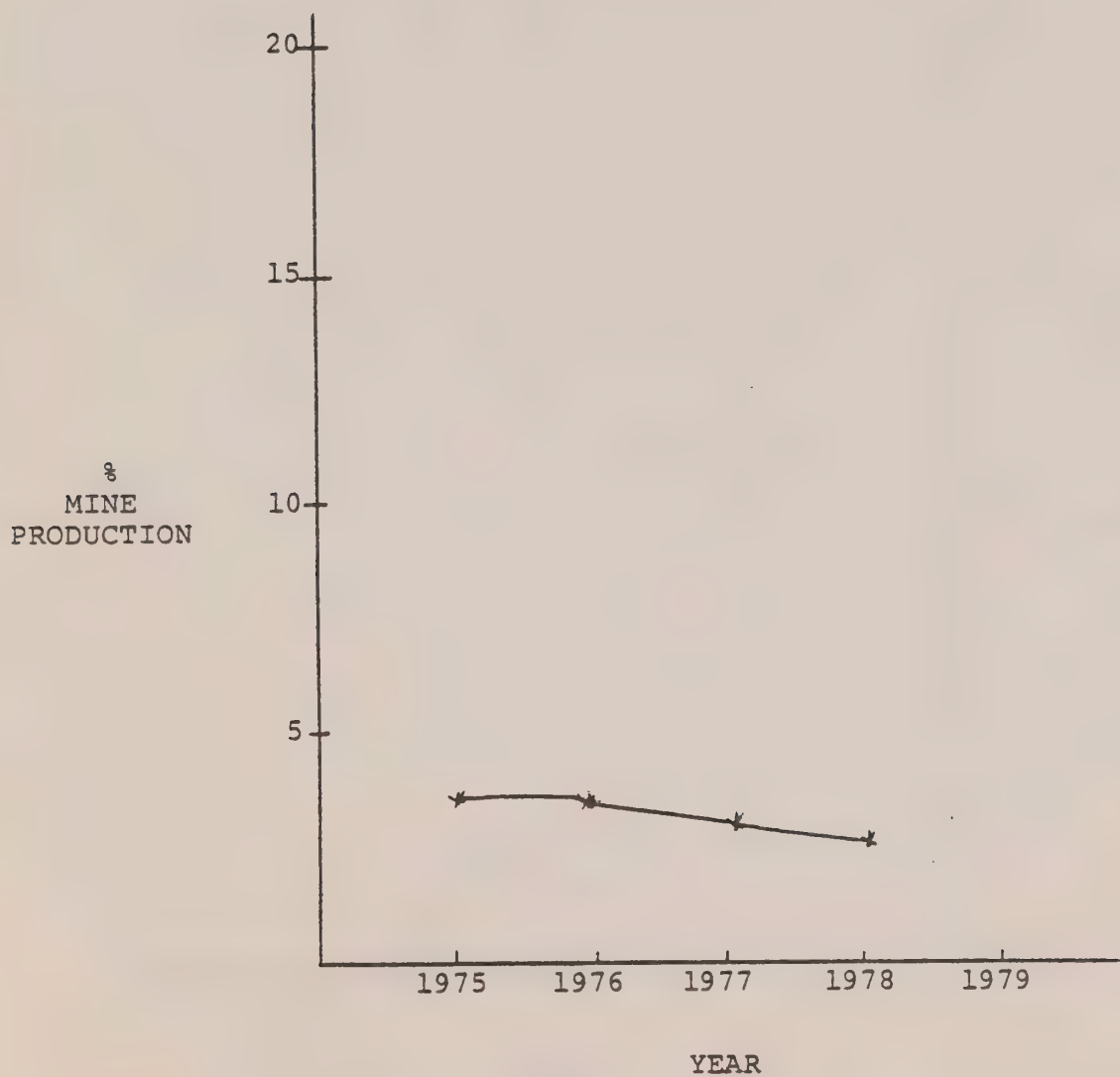


TABLE 38

PERCENTAGE WORLD MINE

PRODUCTION - SILVER

SWEDEN

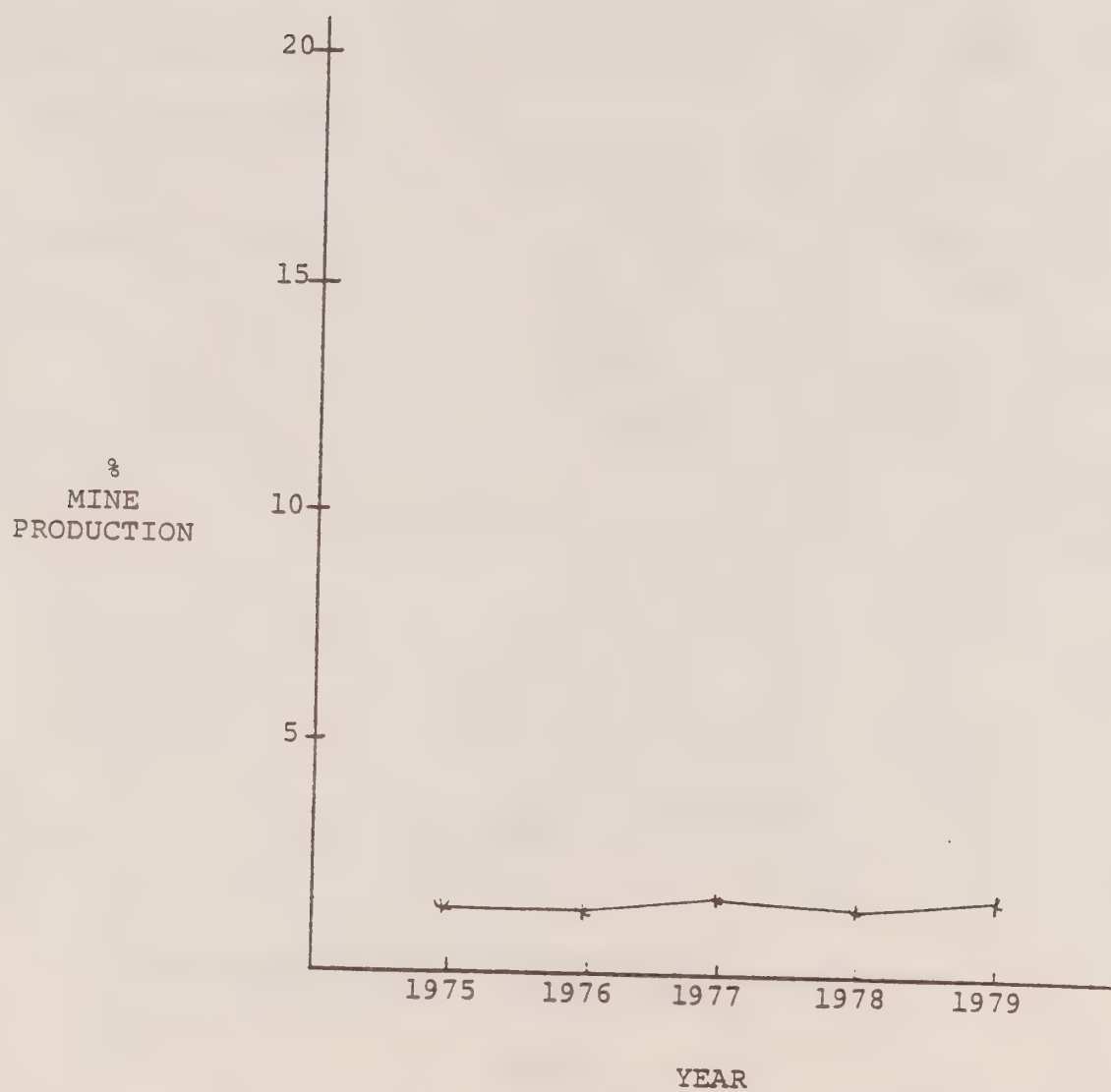


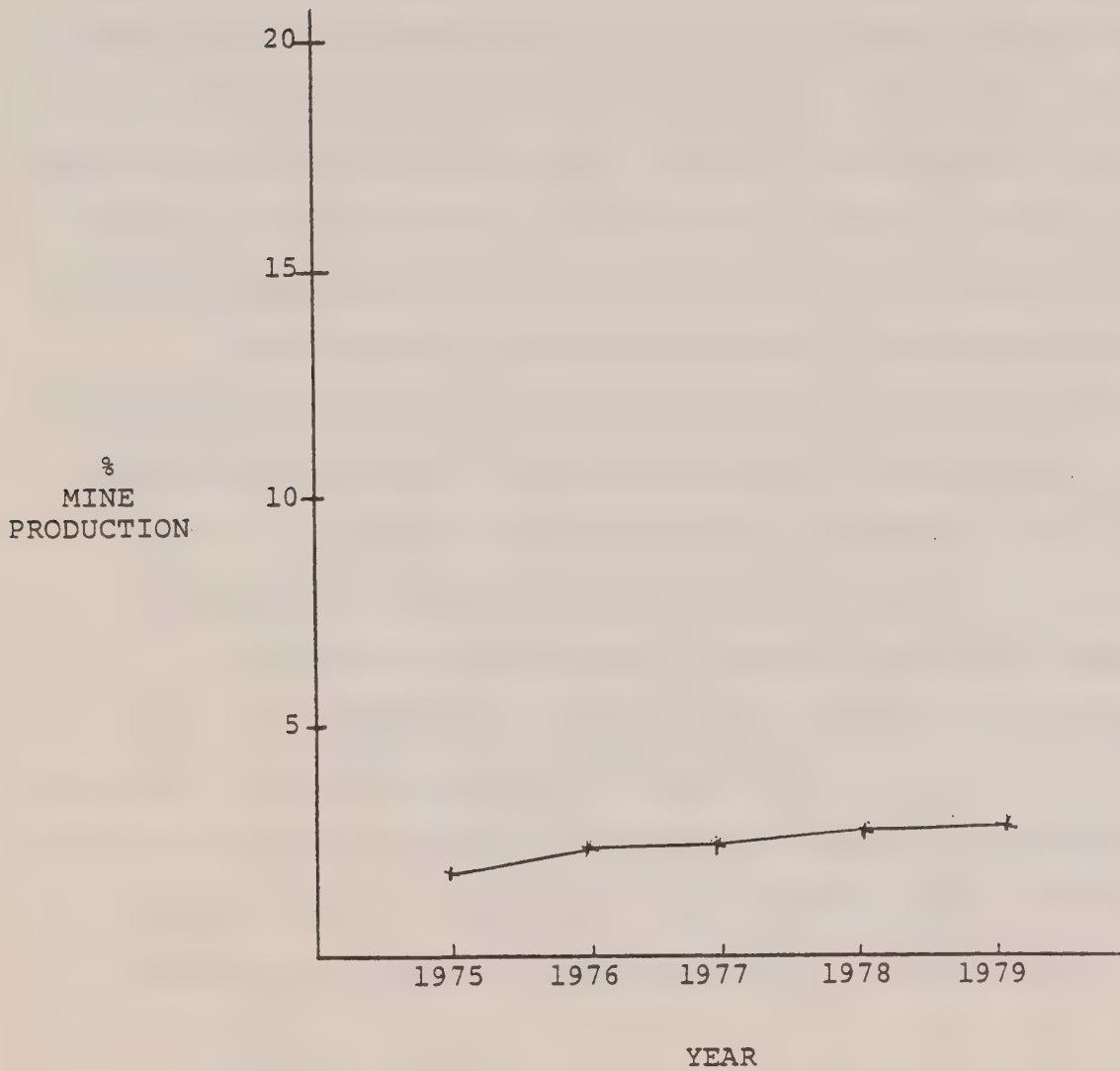


TABLE 39

PERCENTAGE WORLD MINE

PRODUCTION - ZINC

SWEDEN



West Germany:

West Germany is a major producer of zinc.

The recent re-election of the coalition government headed by Chancellor Schmidt demonstrates the political stability which has characterised political life in this country for the last 30 years. Although the activities of a number of terrorists attract strong attention quite frequently, such groups do not pose a serious challenge to the integrity of the current political system.

In terms of external threats, the irritation of a divided Germany and the possibility of expansionist efforts by the Warsaw Pact powers continue to be of concern to West German policy-makers. It is highly improbable, however, that the integrity of the Federal Republic will be seriously challenged in the foreseeable future. Germany continues to concentrate on economic development and not on foreign adventures like Indochina, Suez or Viet Nam.

The success of the post-war economy of West Germany has been very well described in a recent article in the prestigious Dun's Review.<sup>55</sup> This success is reflected in the indices cited in Appendix B. In every case for which there are both Canadian and West German rankings, the West German ratings are better.

Despite this pattern, it is highly improbable that West Germany will attract a great deal of mineral development investment. The major reason for this conclusion is that most of the ore bodies in the country have probably been found some time ago and have been developed already. One indicator of this is the current

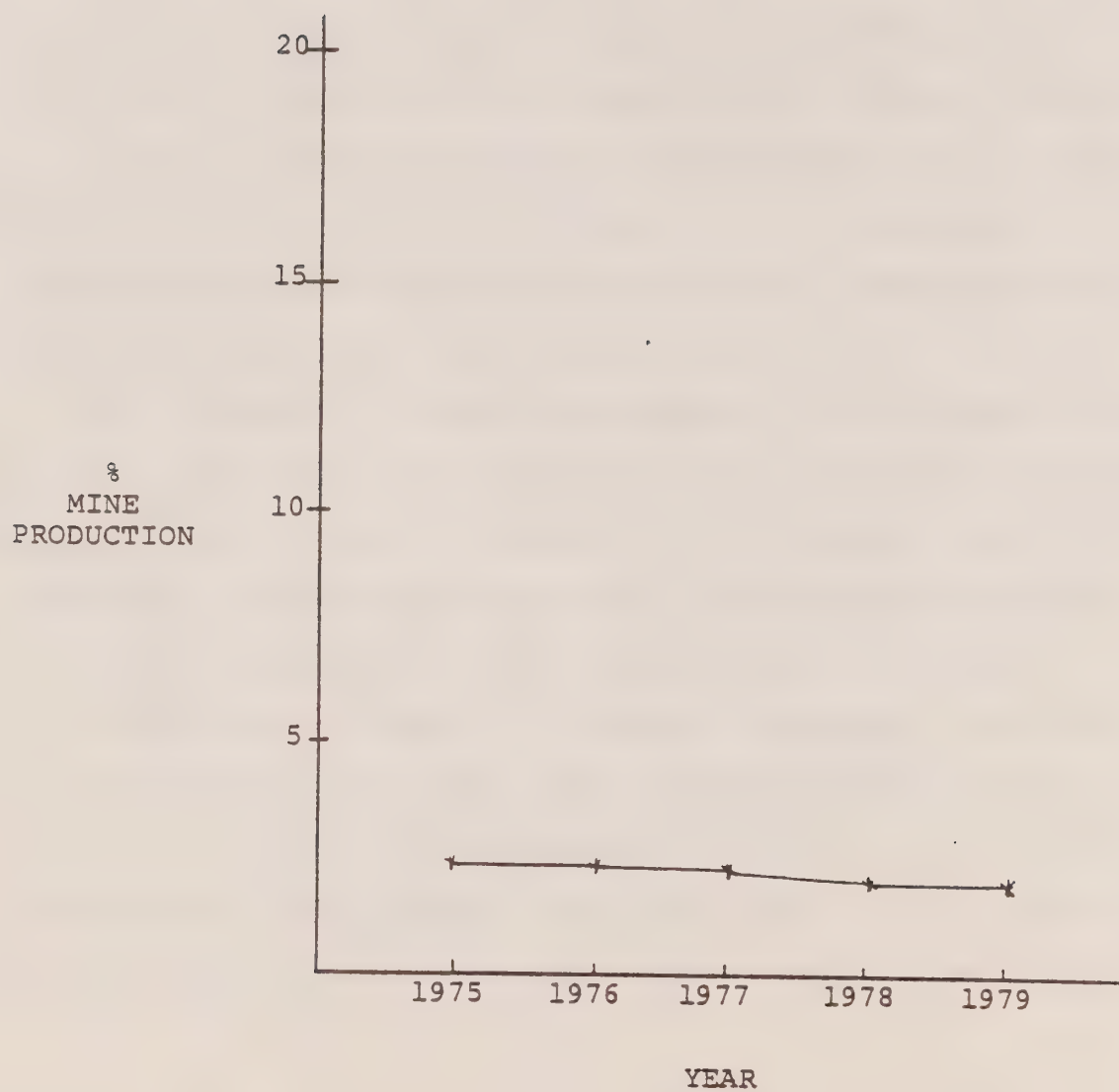
level of West German investment in mineral development in other parts of the world.<sup>57</sup> Canada should be looking to West Germany as a source of investment and not as a competitor for investment in the near future.

TABLE 40

PERCENTAGE WORLD MINE

PRODUCTION - ZINC

WEST GERMANY



Mexico:

Mexico is a major producer of lead, silver and zinc.

Mexico continues to demonstrate a high degree of political stability. President Echeverria has been replaced by President Lopez Portillo and there is no reason to assume that the transfer of power to his successor will be anything other than peaceful. In addition, there does not appear to be any serious internal or external force which threatens the integrity of the state and its existing constitution.

Because of its extensive reserves of oil, now estimated at 50 billion barrels, Mexico's economy is becoming increasingly dependent on this valuable resource. Mexico plans on using its new economic clout to diversify and upgrade its economy. France, West Germany, Sweden, Japan, Canada and the U.S. have expressed interest in joint ventures.

The June 1, 1979 issue of the Latin America Economic Report indicated a protectionist approach on the part of the Mexican government. Foreign investment in high technology and/or labour intensive industry would be welcomed. The 1973 law which required that 51% of all companies' stock be sold into Mexican Lands continued to be a major part of the Mexican government's policy towards multinational corporation investment in the country. Despite this protectionism the June 13, 1980 Latin American Weekly Report predicted that there would be more than \$1 billion of direct U.S. investment in Mexico during 1980.

Despite this investment, not all of Mexico's economy is so healthy. Unemployment is high. Inflation is a major concern. "Non-oil exports are stagnating."<sup>58</sup> Mexico continues to refuse to join the General Agreement on Tariffs and Trade (GATT).

This basic economic weakness and the protectionist policies of the government are reflected in the risk evaluations. In all five of the rankings for which Canadian and Mexican ratings appear, Canada is more highly placed than is Mexico.<sup>59</sup>

It appears that although Mexico may have considerable attractiveness and influence because of its oil resources, investors still feel that Canada continues to be a more secure place in which to invest.



TABLE 41

PERCENTAGE WORLD MINE

PRODUCTION - LEAD

MEXICO

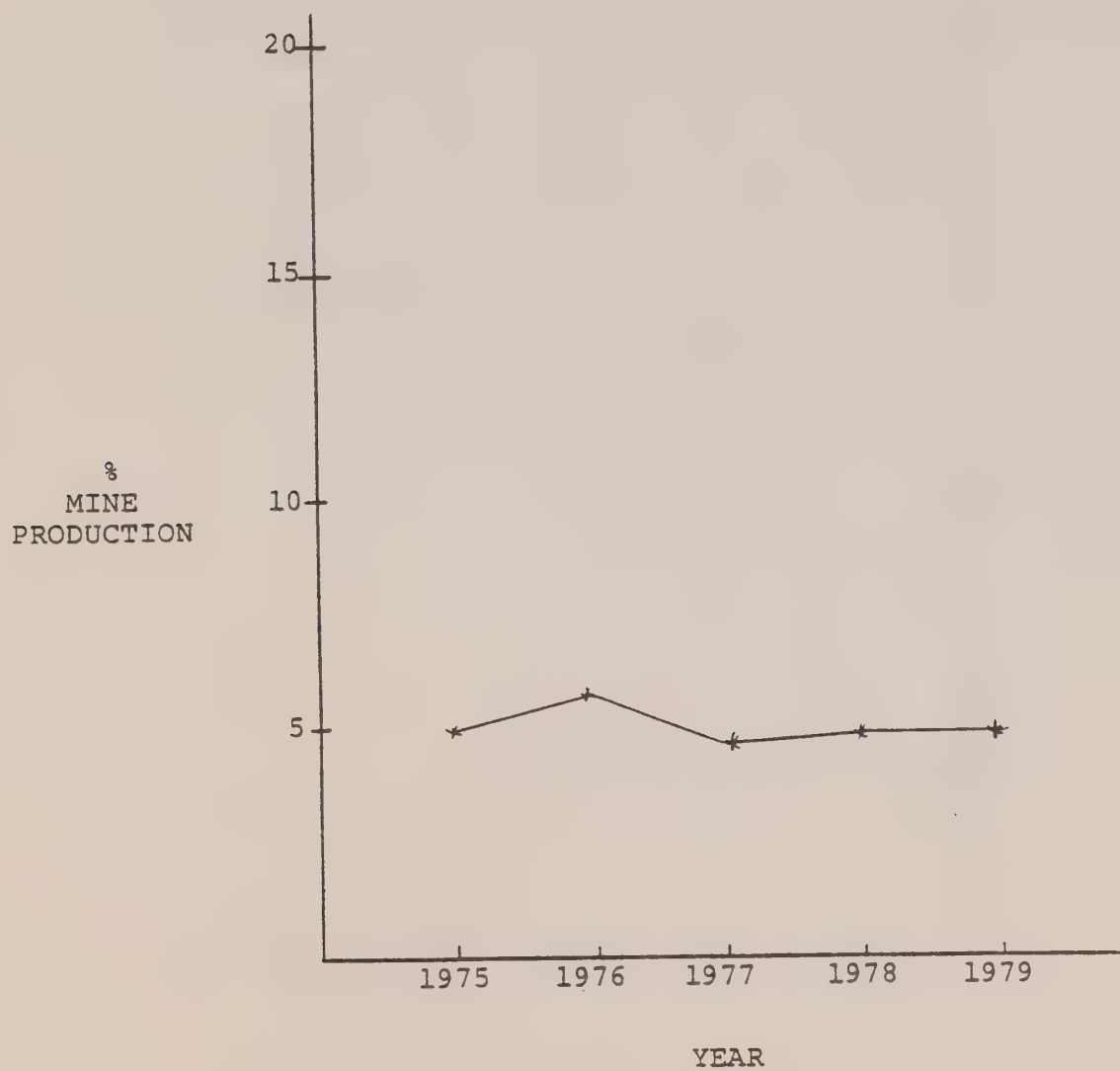


TABLE 42

PERCENTAGE WORLD MINE

PRODUCTION - SILVER

MEXICO

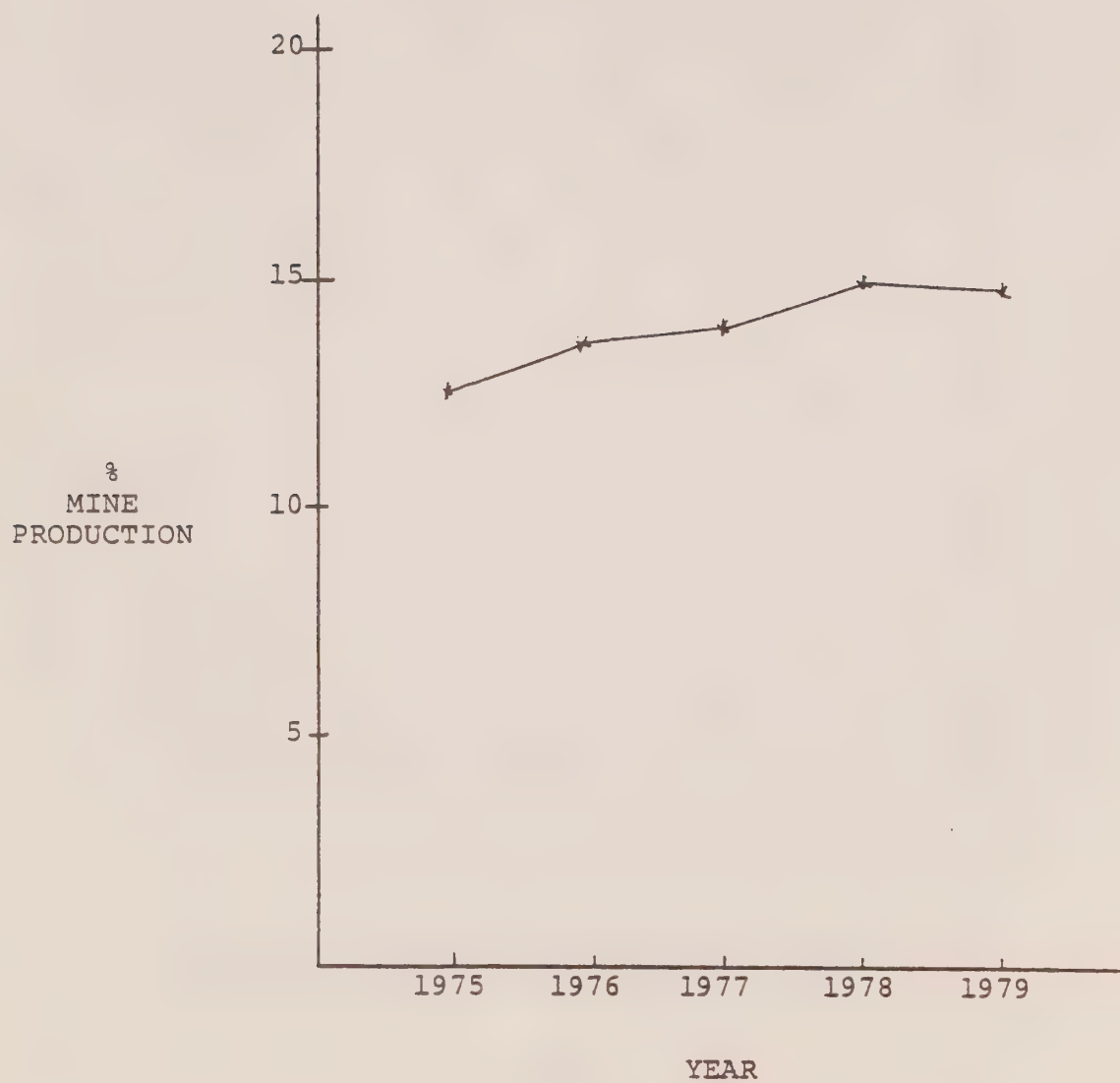
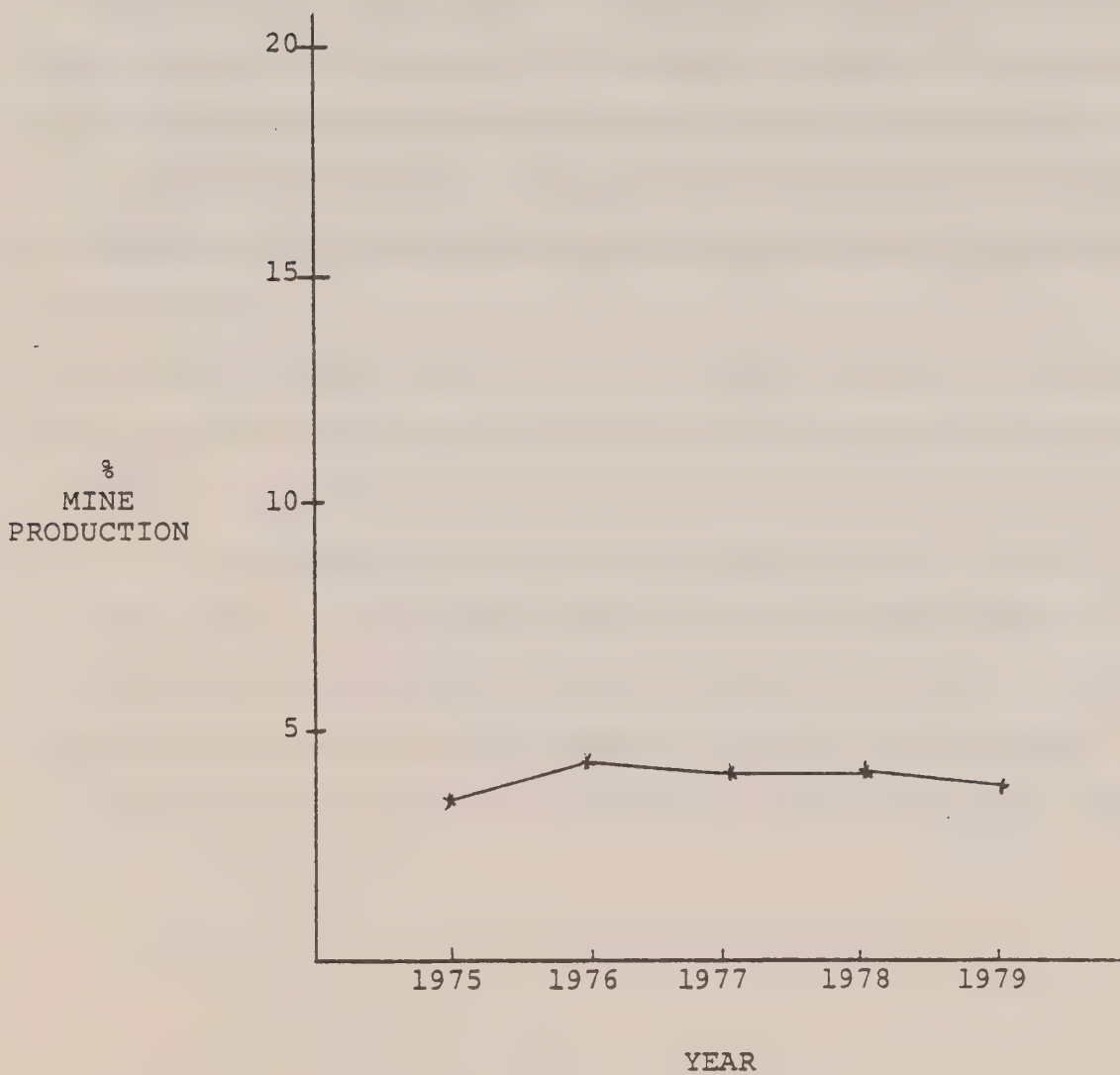


TABLE 43

PERCENTAGE WORLD MINE

PRODUCTION - ZINC

MEXICO



Colombia:

Colombia is a major producer of platinum.

The political situation within Colombia in recent years has not been an enviable one. In 1976 the government imposed a state of siege because of widespread strikes and rioting. The efforts by the 4 major trade unions to call a general strike in 1977 produced the worst violence within the country since the avil war.

This internal instability has been highlighted by frequent politically motivated kidnappings. In 1978 over 100 of these actions by urban guerilla movements were reported. Although the number declined to 30 in 1979, the recent hostage-taking by M-19 guerillas in the Dominican Embassy demonstrated that the tough security laws had failed to deal effectively with the problem.

Although President Turbay's Liberal Party received considerable support in the March 1980 elections, the extent of the internal strife was clearly presented by the President in a televised speech in April. In his speech the President requested an estimated 2,000 guerillas to lay down their arms, so that the government could concentrate on economic development and social reform. Unfortunately, there has been little evidence to suggest that this kind of political instability is likely to change in the near future.

Some of this strife is reflected in the state of the Colombian economy. Although the annual rate of growth in GDP from 1966 to 1976 averaged 6.2% and the 1978 growth rate was 7.9%, inflation continues to be relatively high. Unions have responded by demanding increased wages and costly and violent strikes have become a fact of life in Colombia.

This atmosphere of uncertainty is reflected in the country risk analyses. Of the five indices which provide Canadian and Colombian rankings, all rank Colombia considerably lower than Canada. The Frost and Sullivan forecast assigns a medium level probability of major political change in the near future.<sup>60</sup>

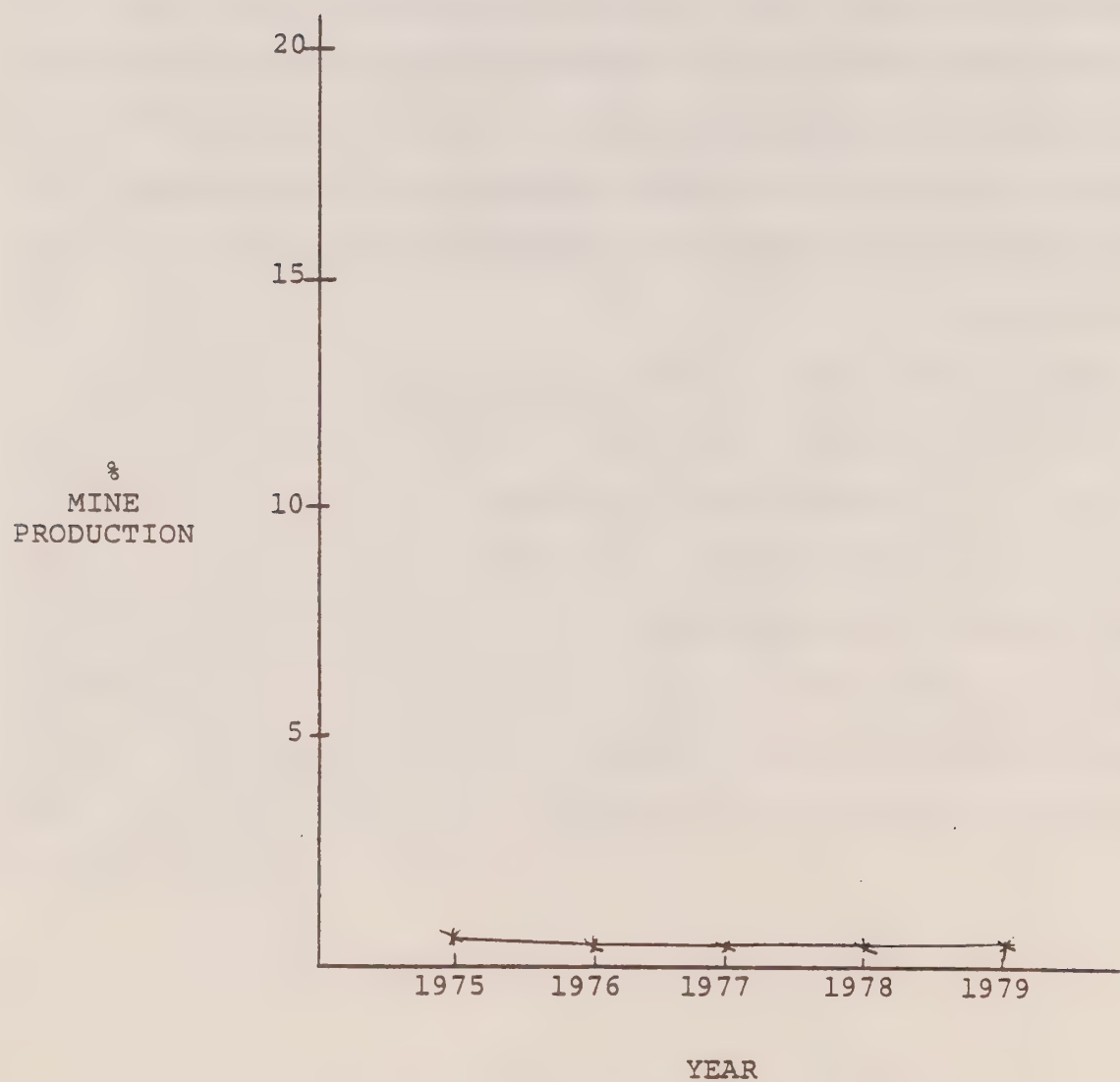
In view of this, it is highly unlikely that Colombia will be a major competitor of Canada in the search for foreign investment capital.

TABLE 44

PERCENTAGE WORLD MINE

PRODUCTION - PLATINUM

COLOMBIA





Papua-New Guinea:

Papua-New Guinea is a major producer of gold.

Papua-New Guinea achieved full independence in 1975. Since that time it has faced both internal and external political problems.

Internally, there have been three difficult problems. One part of the country, the Highlands, feels mistreated by the national government. The development and implementation of economic plans continues to be a failure.<sup>61</sup> In addition, tribal fighting has broken out a number of times and because of this a state of emergency from July to December 1979 was declared. As a result of these types of problems, Dr. Chan's Peoples Progress Party replaced the United Party headed by Mr. Soames on March 11, 1980.

In the past there has also been some strife with Indonesia regarding the border of the two countries. A border treaty between Papua-New Guinea and Indonesia was signed in December 1979 and it should reduce the level of tension between the two countries.

The economy is highly dependent on external aid. About 45% of government revenue comes in the form of direct grants from Australia. Partly because of this, about 50% of all imports come from Australia. A high percentage of Papua-New Guinea's exports are bought by Japan.

Although a recent trade pact has opened New Zealand and Australian markets to Papua and New Guinea, Barnett remains pessimistic. He claims that the tax base will continue to decline and he argues that the "dependence on Australian financing and the relatively low levels and geographically localised nature of internal funding,"<sup>62</sup> pose severe obstacles for future economic development.

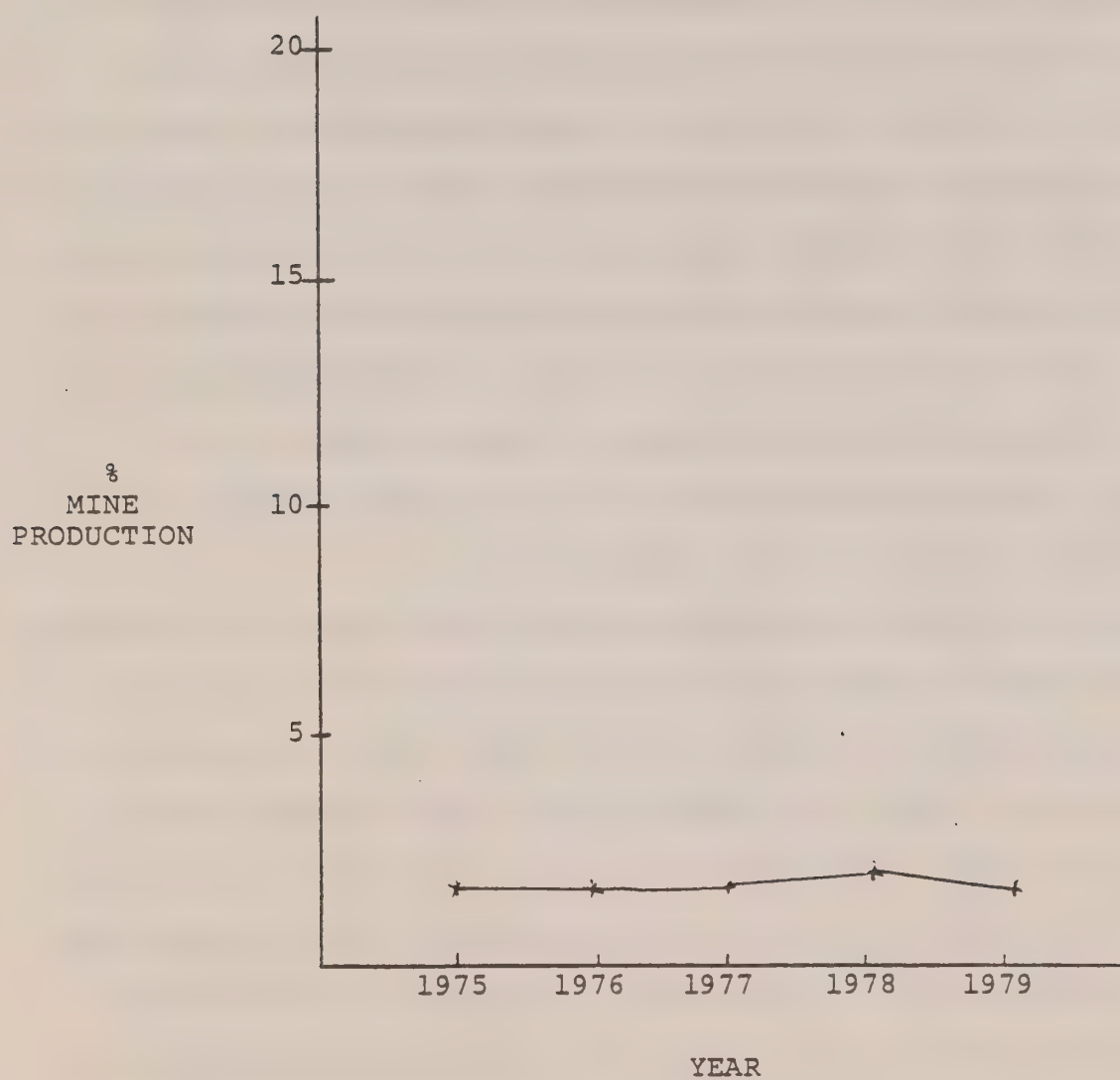
Although the Euromoney 1980 index ranked Papua-New Guinea slightly higher than Canada, the evidence cited above leads to a somewhat more cautious conclusion.<sup>63</sup> Although there may be investment opportunities in Papua-New Guinea, the long-term perspective suggests that Canada is likely to be viewed as a more secure investment area than Papua-New Guinea. The recent approval to develop the O.K. Tedi copper-gold deposits should alert us to the fact that very real investment opportunities in the mining sector may exist in the near future and these may provide an incentive for foreign investment.

TABLE 45

PERCENTAGE WORLD MINE

PRODUCTION - GOLD

PAPUA - NEW GUINEA



India:

India is a major producer of iron ore.

The re-emergence of Ms Gandhi as Prime Minister in 1980 reflected the economic and political upheavals which have been common to Indian life in recent years.

Internally, there is considerable unrest. Rioting in Assam has resulted in at least 80 deaths since September of 1979. Troops were called out in April 1980 to quell disturbances, but the violence and civil disobedience continued well into June. As early as February, 1980, Mrs. Gandhi imposed Presidential rule in nine states controlled by opposition parties. The Financial Times argued that this unrest was the result of strong antagonism to the central government.

In addition labour problems reflect the high inflation rates. Millions of man days in the oil, transportation and power industries were lost because of labour unrest. The Economist predicts that Ms Gandhi will face real problems in attempting to control "rival" unions.<sup>64</sup>

Other economic indicators provided little basis for optimism. The 1979 budget imposed higher taxes and called for a record deficit of \$1.65 billion for 1979-80. Real GNP is expected to fall by 3-5% in 1980. In addition "the largely unprofitable public sector has three quarters of all investment in industry: many of the funds come from heavy taxes which have crippled individual enterprise."<sup>65</sup> In addition, it appears that the Foreign Exchange Relation Act is likely to be applied more stringently. This forces many foreign companies operating in India to reduce

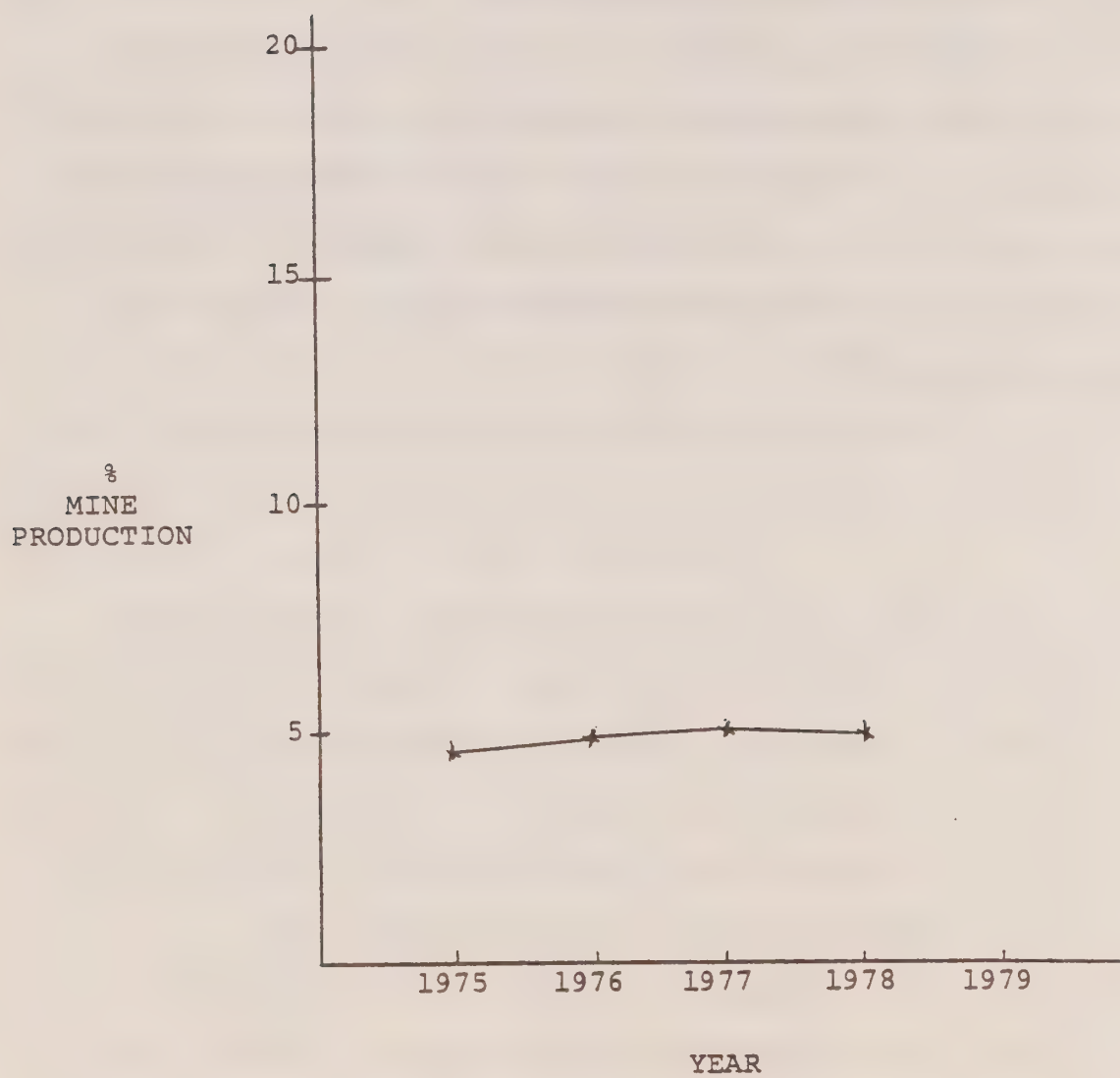
their equity position to 40%.<sup>66</sup>

There have been some rather more optimistic developments regarding the mining and mineral processing industries in India in recent years. A Soviet-India agreement in 1979 called for an expansion of existing steel mills and the construction of new steel plants. A France-India agreement, which was approved in 1980, provided for French assistance in the development of India's coal resources. It also proposed the construction of a 700,000 metric ton alumina plant in Orissa State.

Despite these developments, the future does not seem to provide for rapid improvements in the state of India's political and economic life. Two of the three indices place Canada considerable ahead of India and these two, in my opinion, reflect the advantageous position which Canada is likely to enjoy for the next several years.<sup>67</sup>

TABLE 46

PERCENTAGE WORLD MINE  
PRODUCTION - IRON ORE  
INDIA





Japan:

Japan is a major producer of platinum, silver and zinc.

The recent success of Mr. Suzuki in leading his Liberal Democratic Party back into power on July 17, 1980 indicates the political stability of the country.

Although inflation continues to be a serious concern to the Japanese government and its trade surpluses are criticised by its major trading partners, most observers express confidence about Japan's future. Tracy Dahlby expects that "the Japanese are sure to prove to be more resilient than most in meeting competitive challenge."<sup>68</sup> Even Herman Kahn predicts continued growth of at least 6.7% in the Japanese economy.<sup>69</sup>

This is reflected in the risk indices. All three of the ratings which provide Japanese and Canadian assessments rank Japan above Canada.<sup>70</sup>

This should not concern us greatly because Japan is basically a resource poor country. Indeed Dahlby points out that "Japan remains overwhelmingly committed to the export of manufactured goods to pay for its overseas purchases of primary materials..."<sup>71</sup> An examination of production statistics provided by Dr. H. Strauss, Department of Economics, Laurentian University, indicates a pattern of stabilisation and declining production by Japanese mines. Increasingly Japan appears to be becoming more dependent on foreign minerals.

In essence, the situation regarding Japan is similar to the one involving West Germany. In terms of investment in mineral development, Japan is more likely to be making investments in foreign countries rather than attempting to attract it.

TABLE 47

PERCENTAGE WORLD MINE  
PRODUCTION - PLATINUM

JAPAN

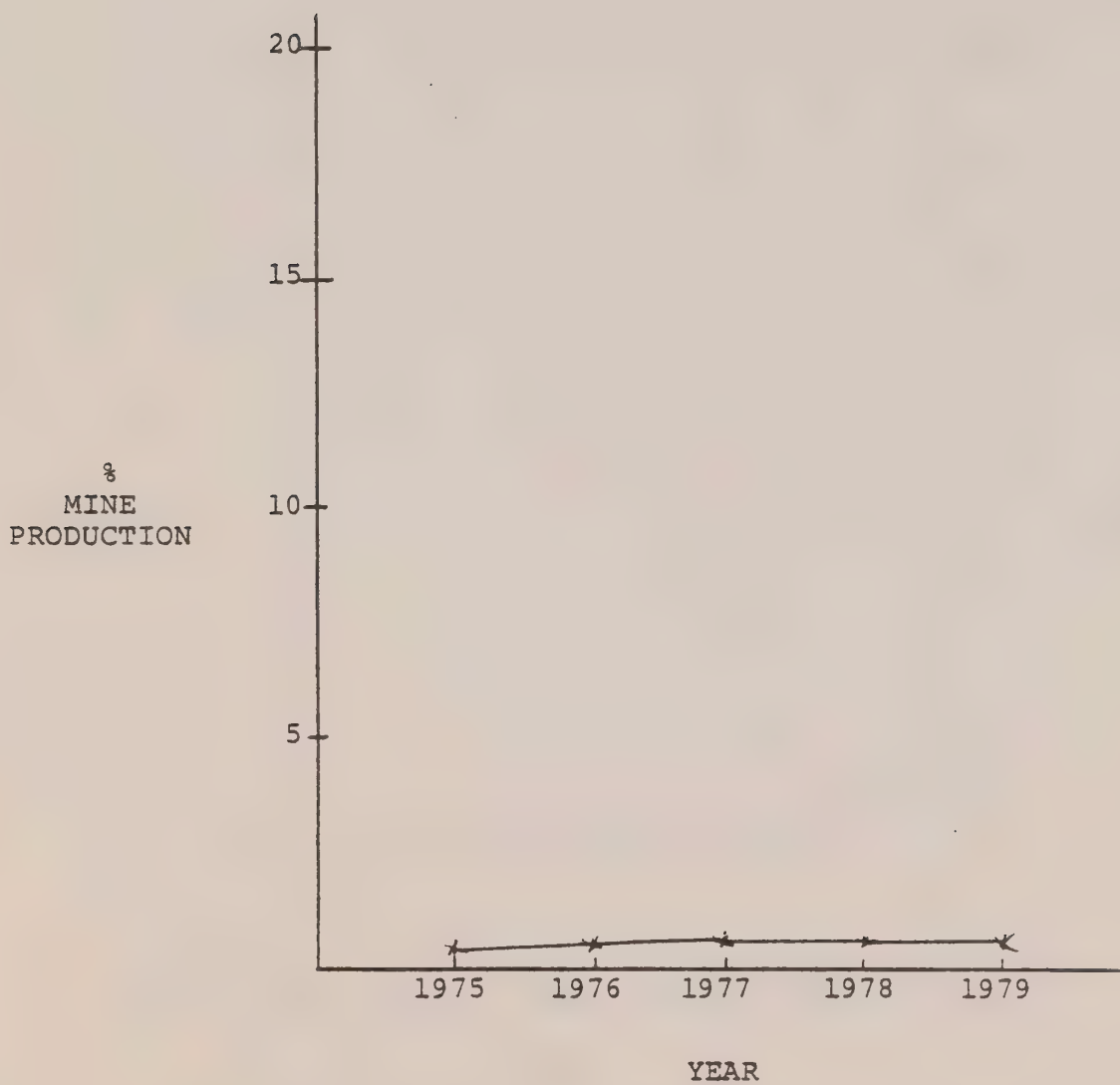


TABLE 48

PERCENTAGE WORLD MINE

PRODUCTION - SILVER

JAPAN

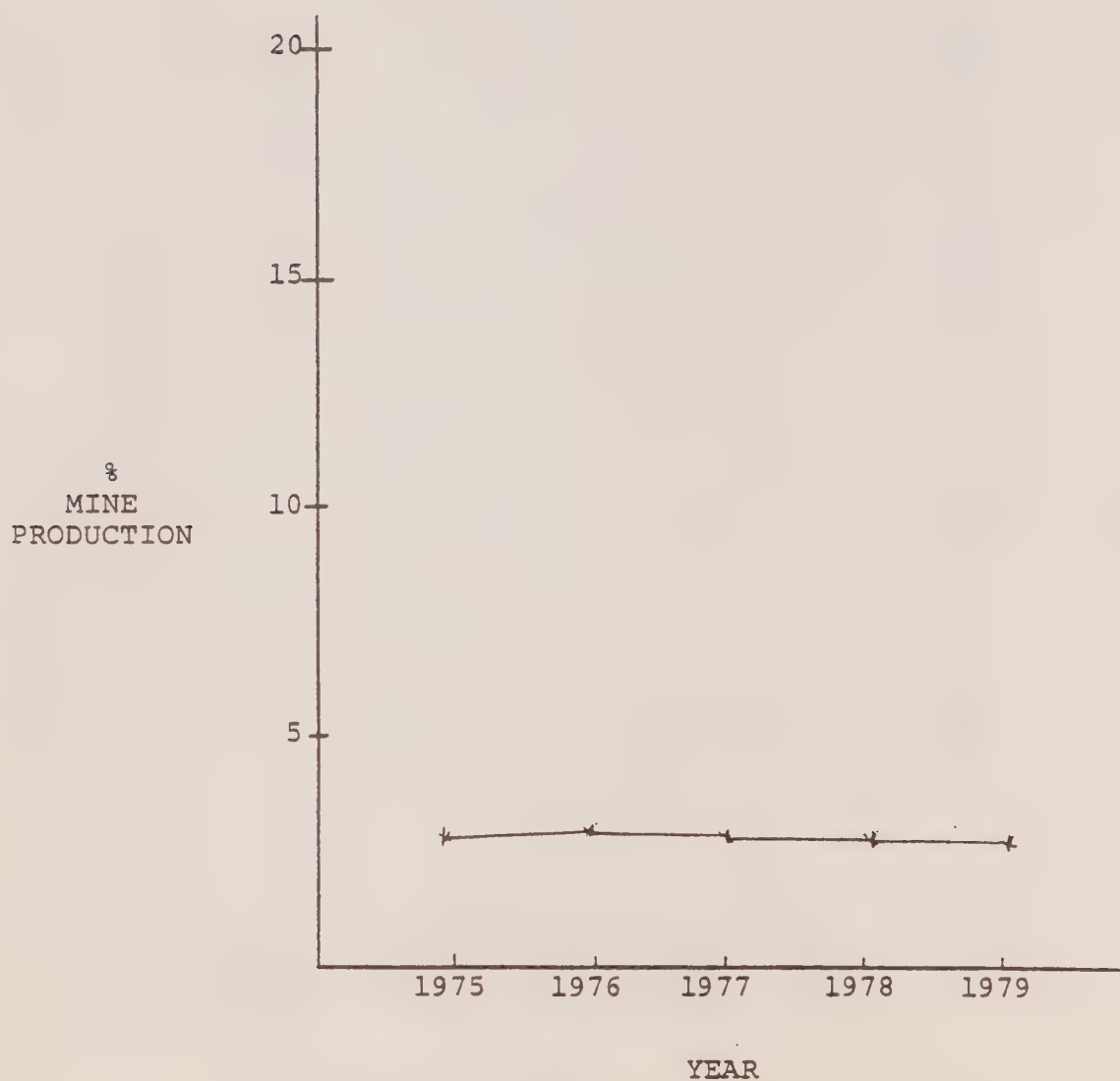
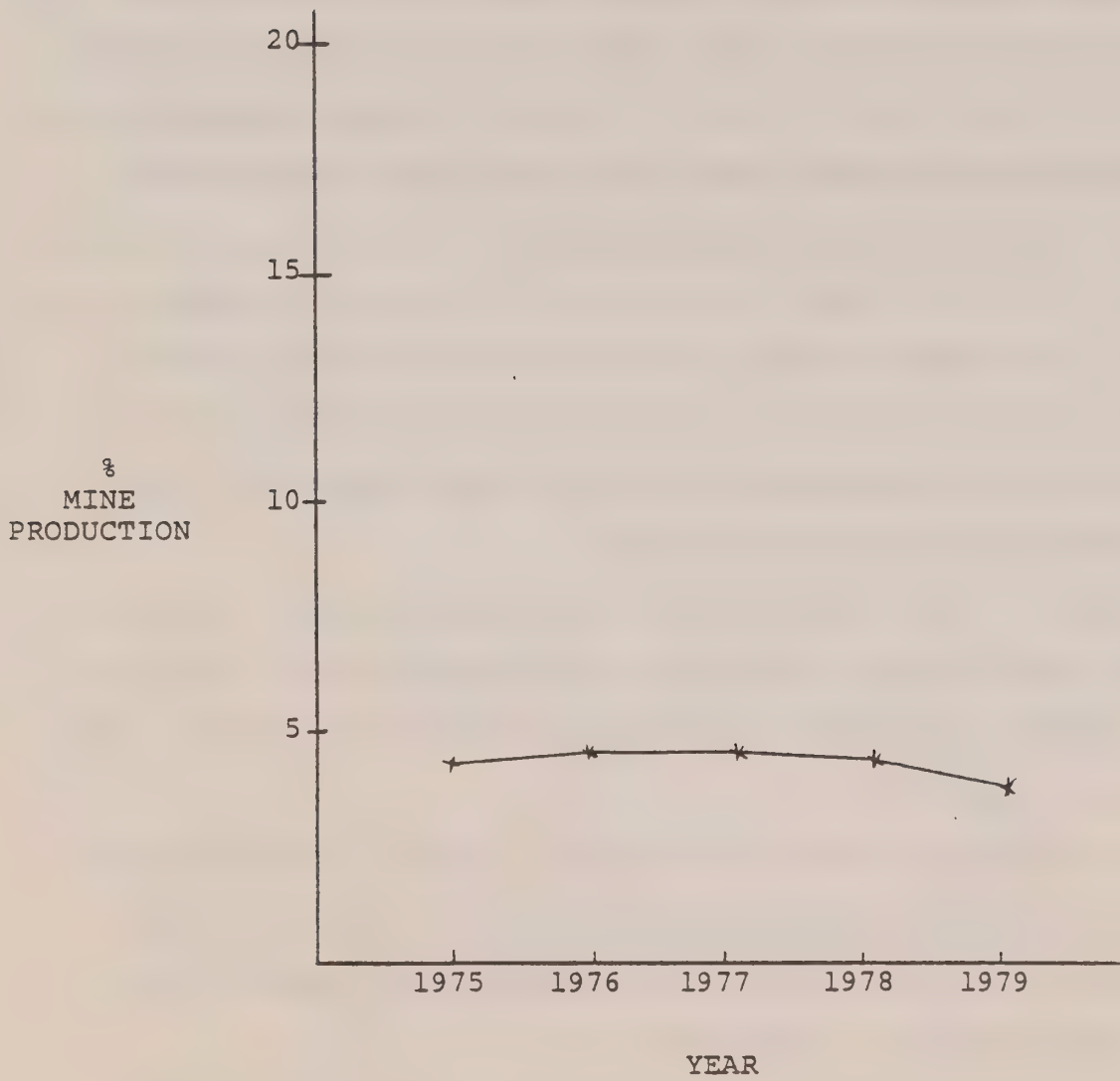


TABLE 49

PERCENTAGE WORLD MINE

PRODUCTION - ZINC

JAPAN



Dominican Republic:

The Dominican Republic is a major producer of nickel and gold.

The recent political history of the Dominican Republic has been a stormy one. In 1973 a state of emergency was declared when guerilla forces landed inside the country. This experience repeated itself in 1975. President Guzman, who assumed office in 1978, declared a political amnesty in September 1979. Unfortunately, the government's response to its growing economic difficulties exacerbated the internal political situation and violence erupted in May of 1980. The threat of a general strike prompted the government to arrest a number of union leaders in June and many union leaders went into hiding and indicated support for a variety of opposition groups.

In the past two years, the economy of the country has weakened. The budget deficit in 1979 was \$345 million and continued to increase into 1980. The government's freeze on public employee wages and increased charges for electricity, oil and gas provoked the unions and employees.

On May 28, 1980, the Governor of the Central Bank resigned. He argued that the Bank was printing new money to cover the budgetary shortfall and that, in his opinion, this was a policy which he could not support.

In an effort to improve its economic outlook, the Dominican Republic is actively searching for foreign investment. It has established three free zones where assembly operations are conducted with Government incentives.



In the field of mineral development, however, the Dominican Republic is not so encouraging. "In actuality, there exists a series of areas which are reserved for national investment, such as public utilities ..., mines and hydrocarbons ... ." <sup>72</sup> In addition, the normally generous Foreign Investment Law does not apply to the mining sector of economy and a much more complex set of mining laws create some confusion.

The risk indices confirm the impression indicated previously. The Dominican Republic is consistently ranked much lower than Canada. Frost and Sullivan forecast a medium level risk of large scale political change. <sup>73</sup>

On this basis, it would appear that Canada has relatively little to fear from the Dominican Republic in terms of investment attractiveness.

TABLE 50

PERCENTAGE WORLD MINE  
PRODUCTION - NICKEL  
DOMINICAN REPUBLIC

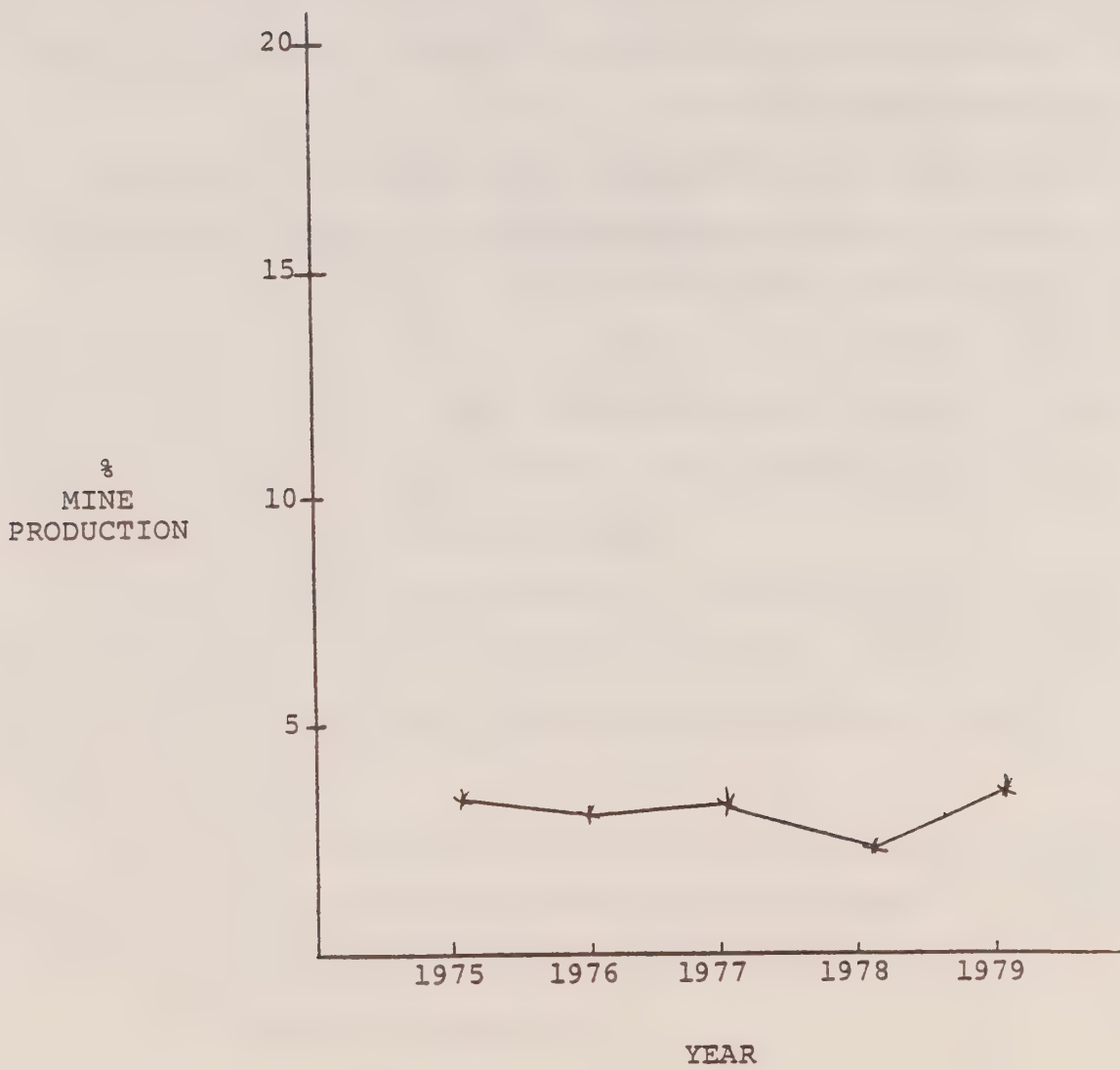
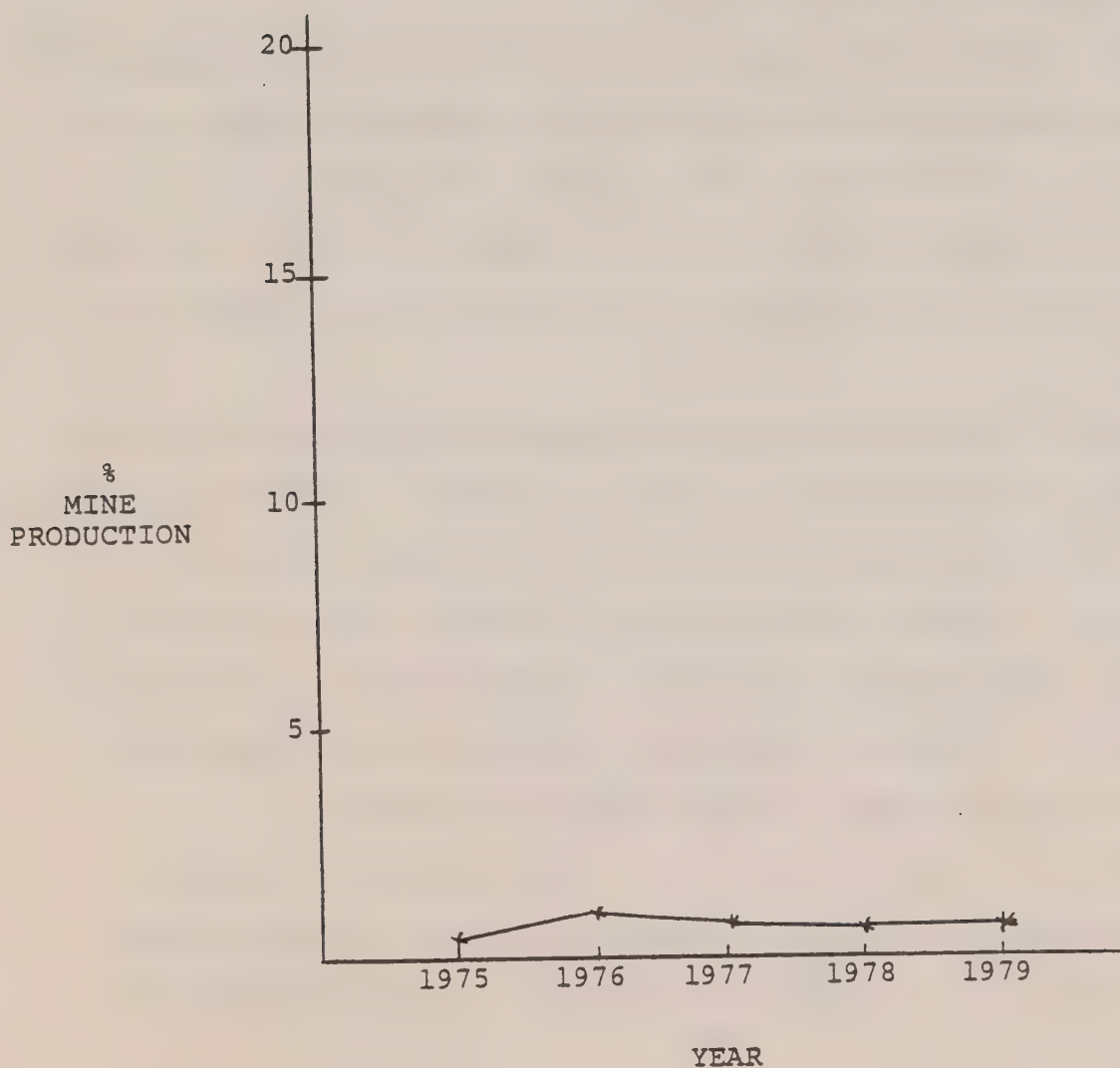


TABLE 51

PERCENTAGE WORLD MINE

PRODUCTION - GOLD

DOMINICAN REPUBLIC



Canada:

Canada is a major producer of copper, gold, iron ore, lead, nickel, platinum, silver, and zinc.

Canada's image in terms of its attractiveness is a good one. The preceeding analysis indicates that although we can expect serious competition from some countries such as Australia and the United States, we should be able to attract investment for mineral development as long as a reasonable economic return can be expected by the investor.

The risk indices suggest that much of the available expertise considers Canada to be a place in which reasonable return on investment can be expected. The Japanese survey ranks only one of our major competitors, the U.S.A., ahead of Canada. The same is true for the Institutional Investor rankings and the BERI Index.<sup>74</sup>

In the future, Canada must continue to maintain and promote its image as a good place in which to invest. At the same time some serious thought should be given to certain aspects of federal policy. The most controversial of these is the activity of the Export Development Corporation and its loans to assist mining development in foreign countries. The most recent example of this involves the Cerro Colorado deposit in Panama.

This issue continues to be an important and vexing one. Although both sides of the argument can present effective positions, there is one crucial question which must be carefully

TABLE 52

PERCENTAGE WORLD MINE

PRODUCTION - COPPER

CANADA

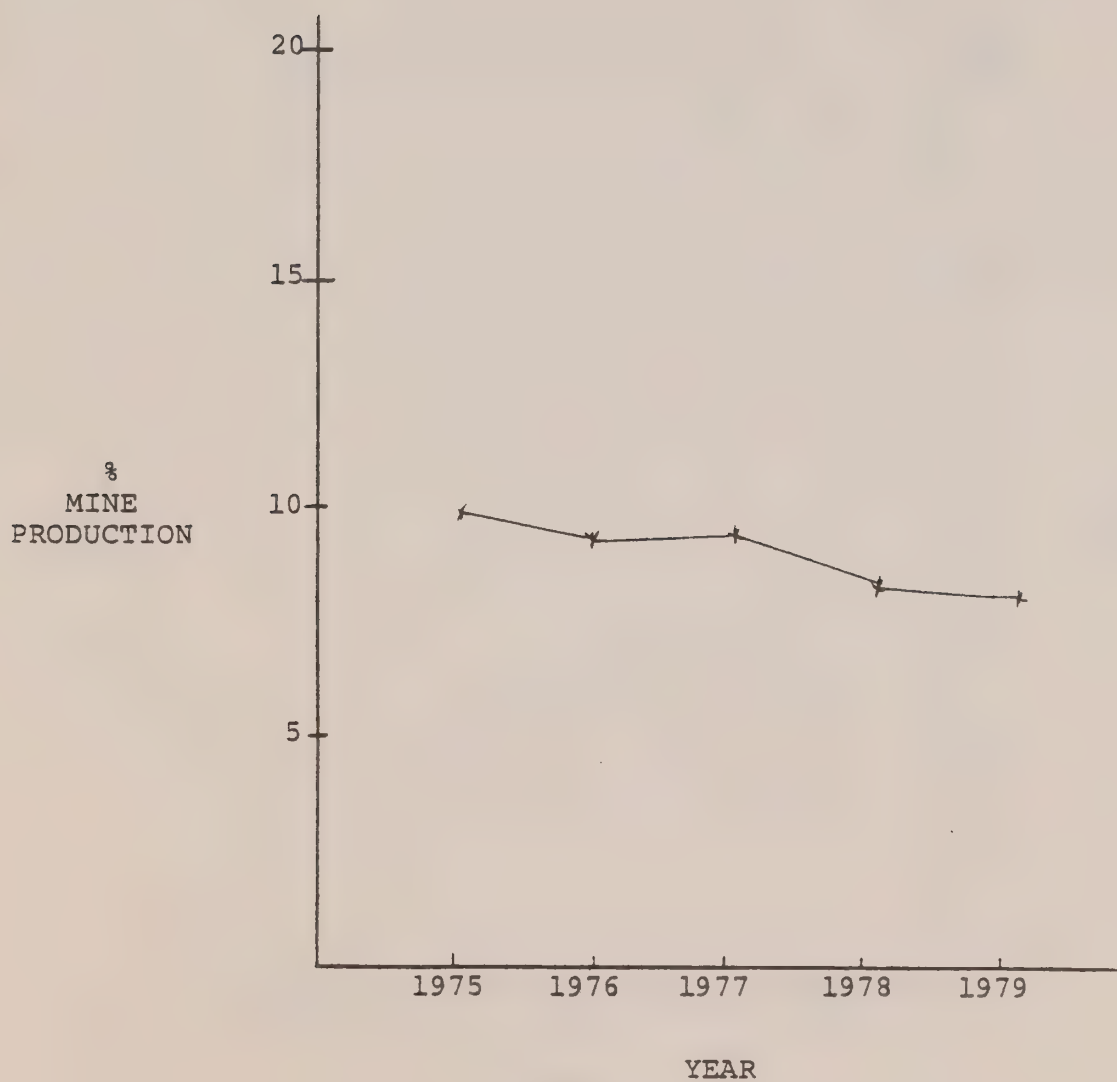


TABLE 53

PERCENTAGE WORLD MINE  
PRODUCTION - GOLD  
CANADA

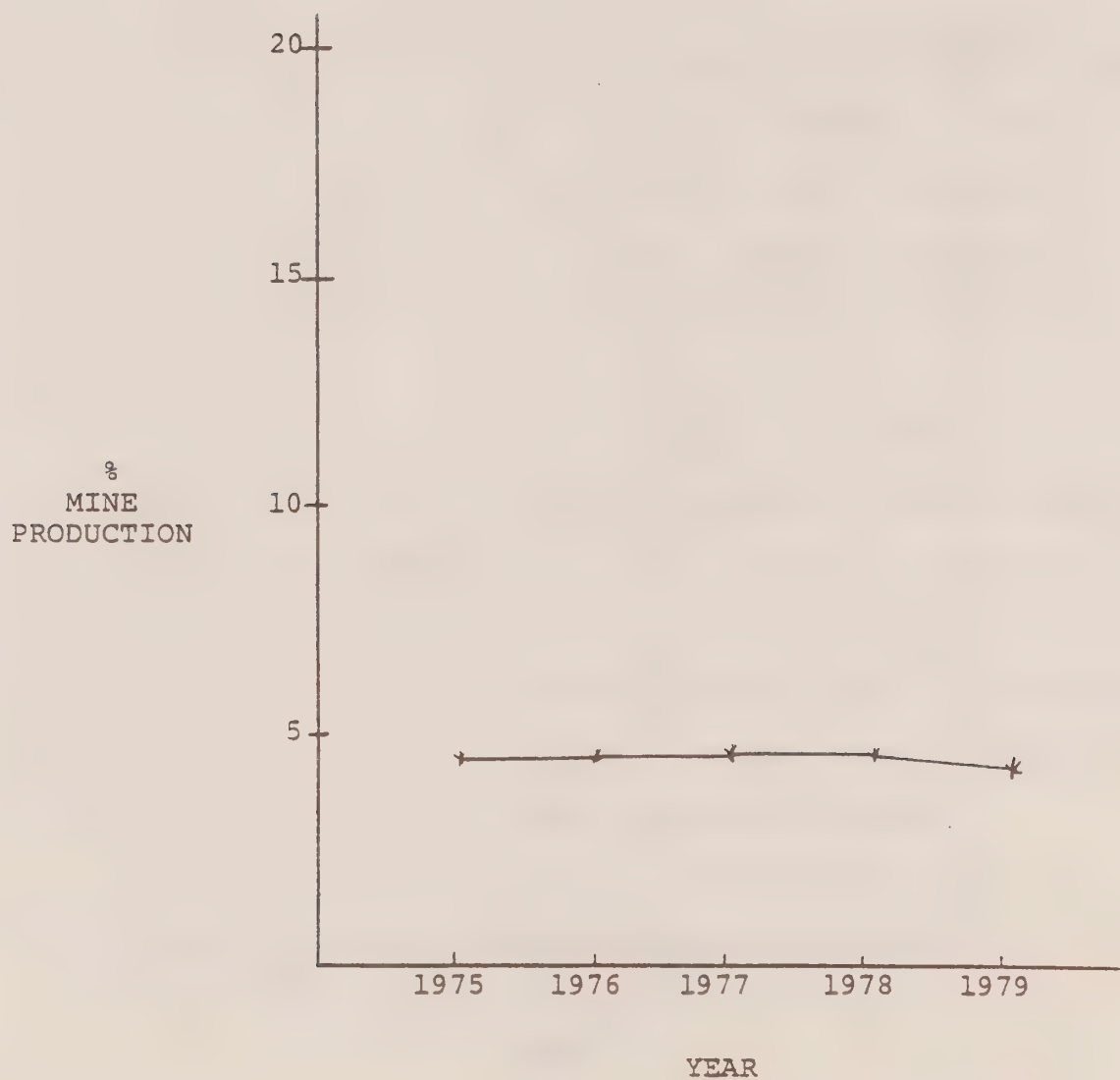




TABLE 54

PERCENTAGE WORLD MINE  
PRODUCTION - IRON ORE  
CANADA

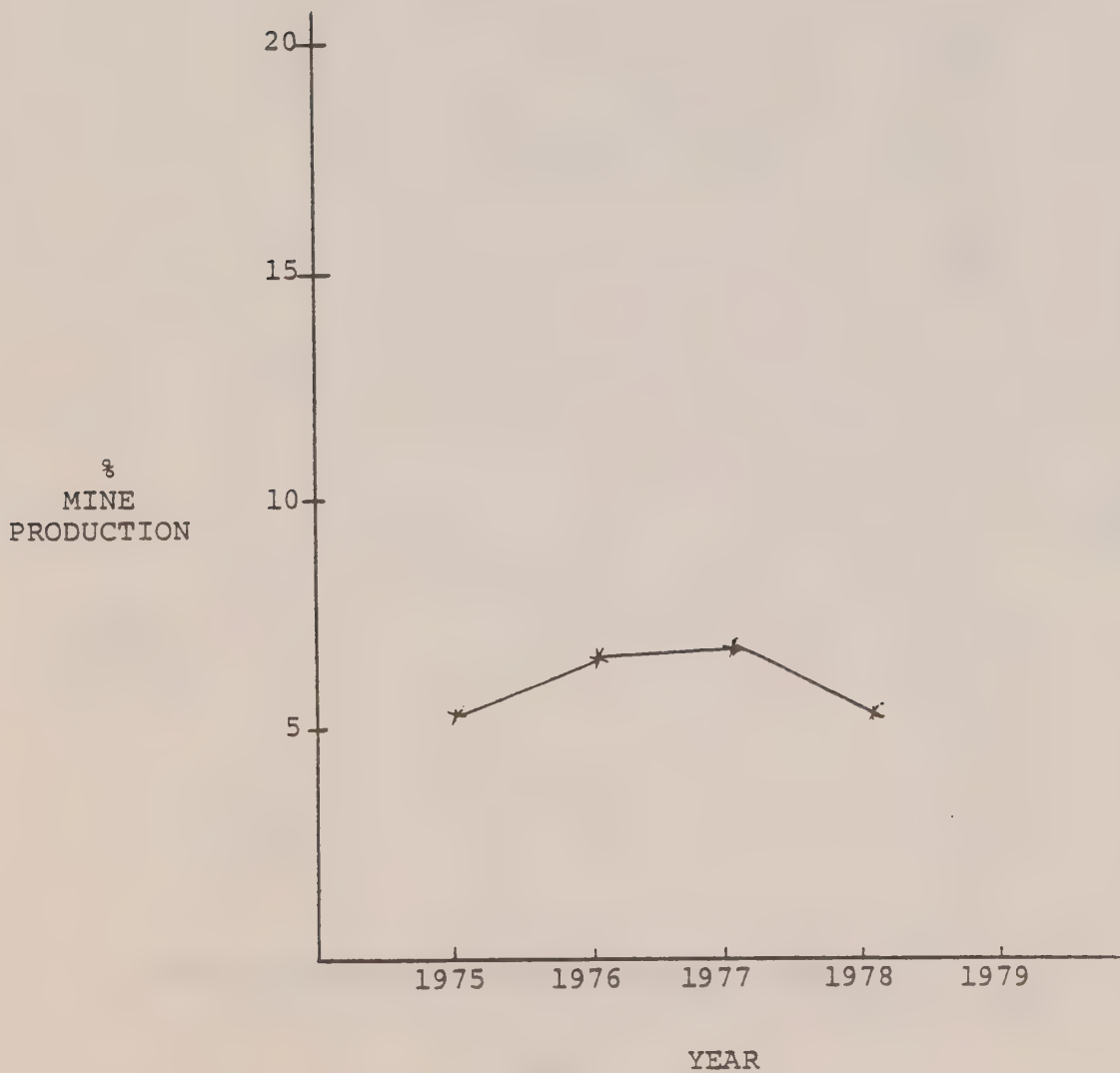


TABLE 55

PERCENTAGE WORLD MINE  
PRODUCTION - LEAD  
CANADA

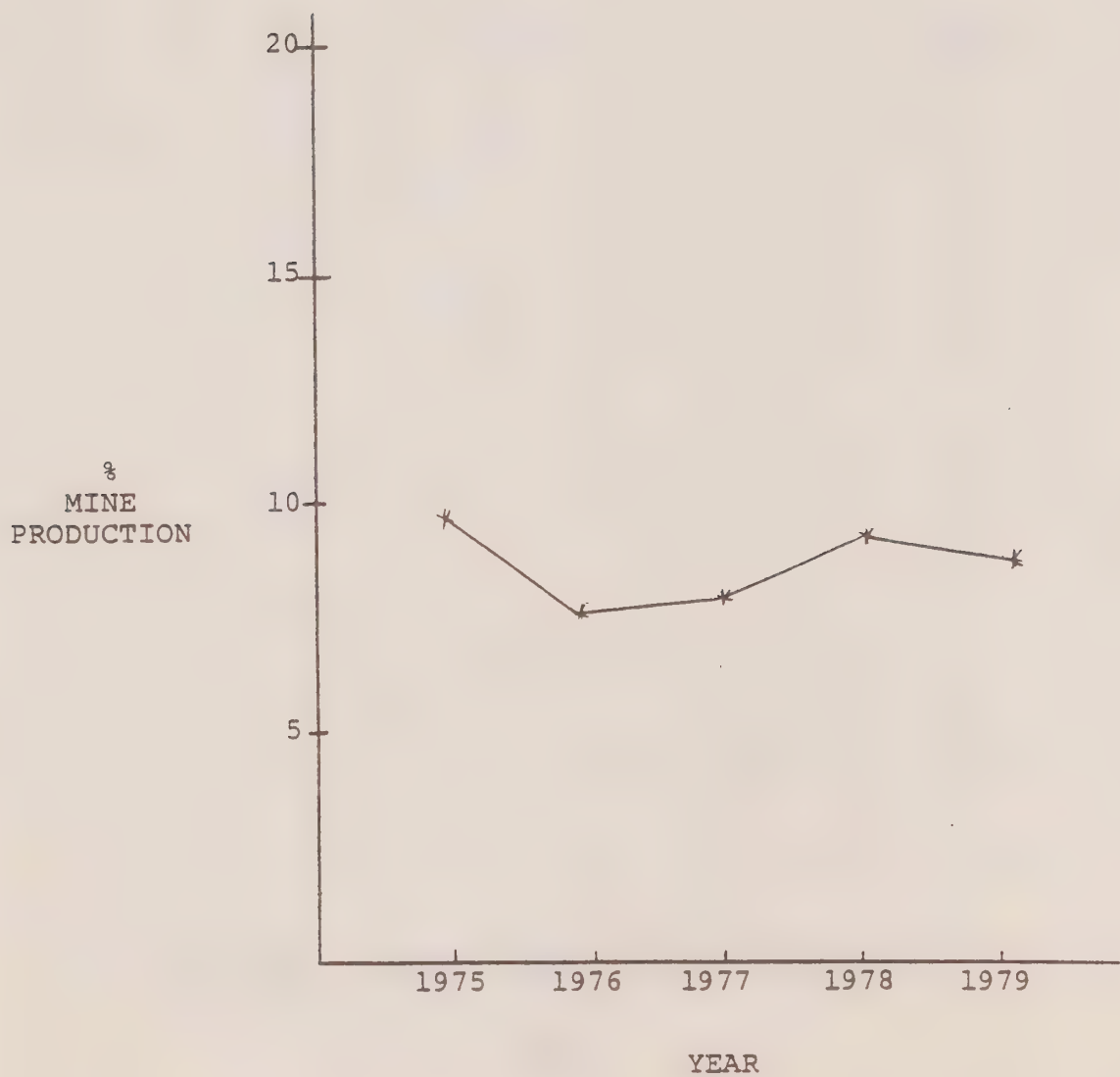


TABLE 56

PERCENTAGE WORLD MINE  
PRODUCTION - NICKEL  
CANADA

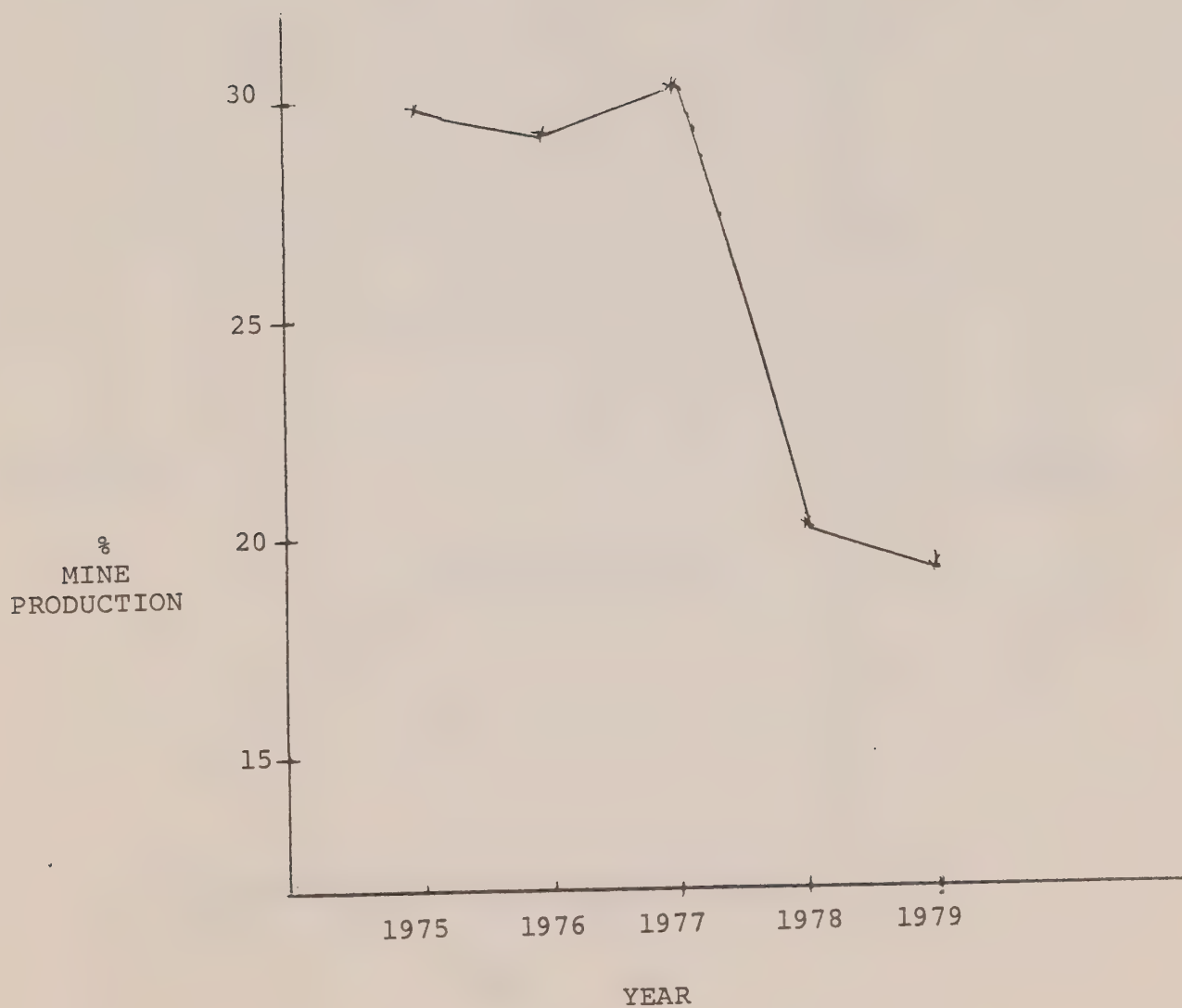


TABLE 57

PERCENTAGE WORLD MINE  
PRODUCTION - PLATINUM  
CANADA

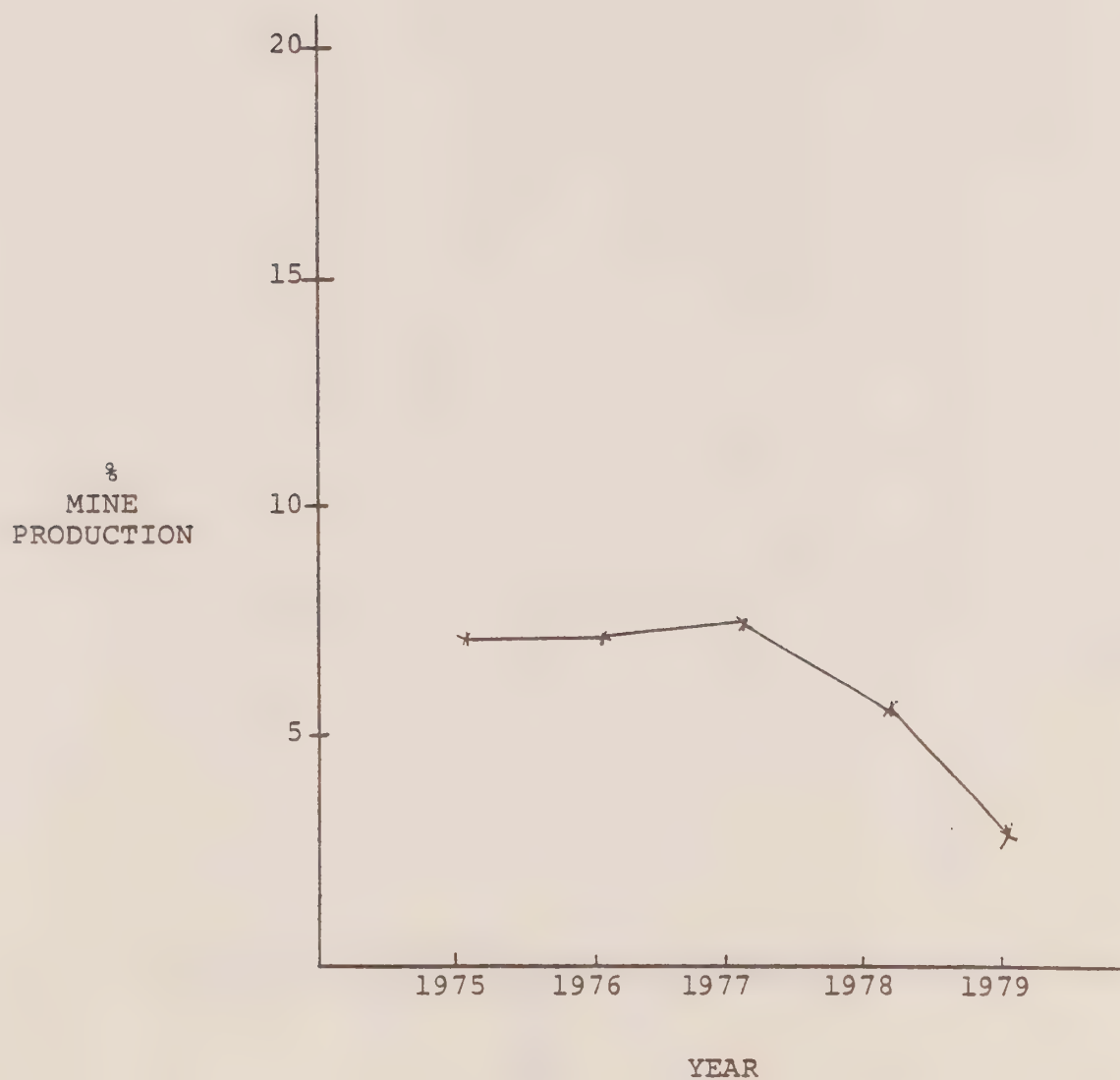


TABLE 58

PERCENTAGE WORLD MINE

PRODUCTION - SILVER

CANADA

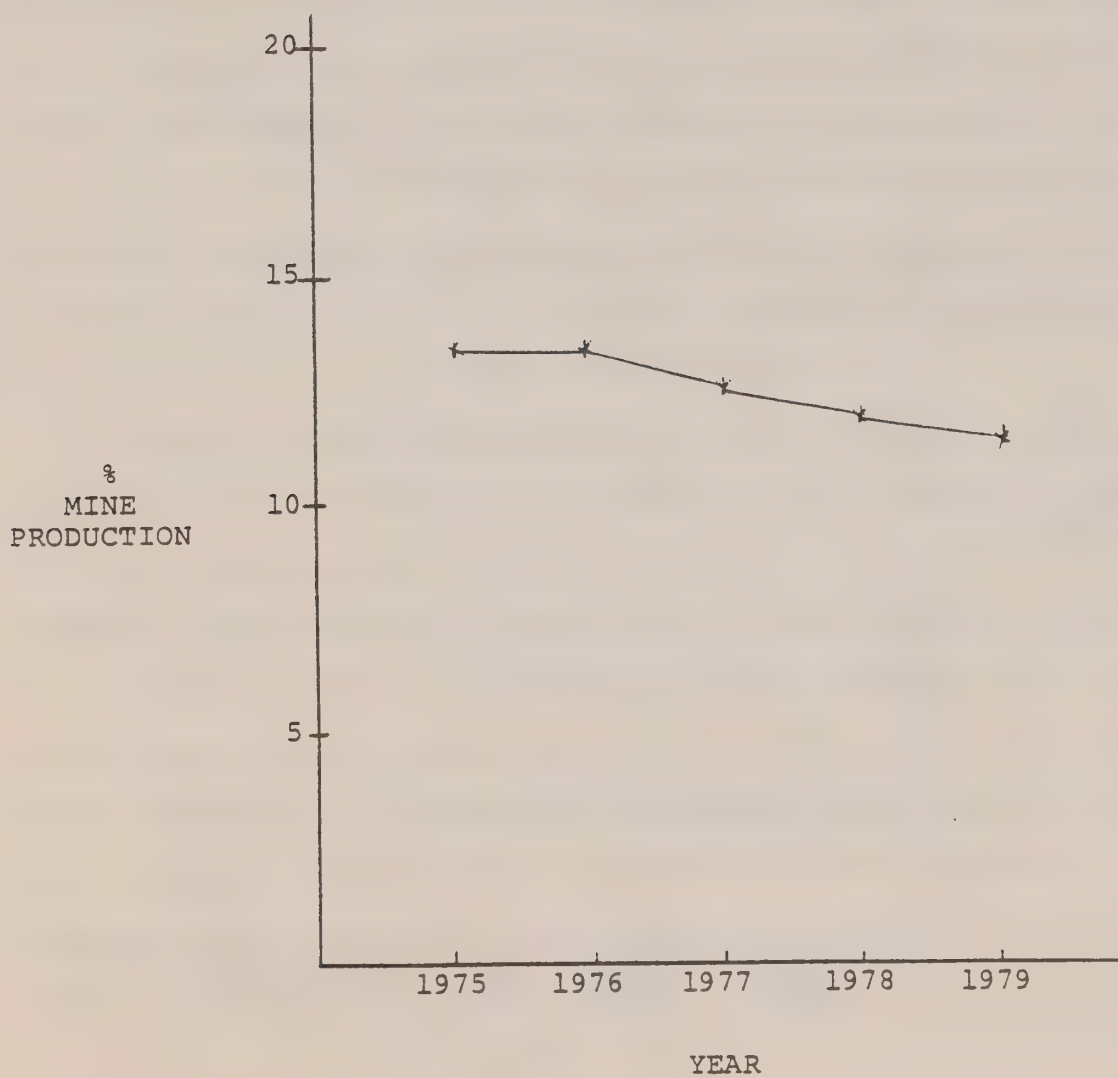
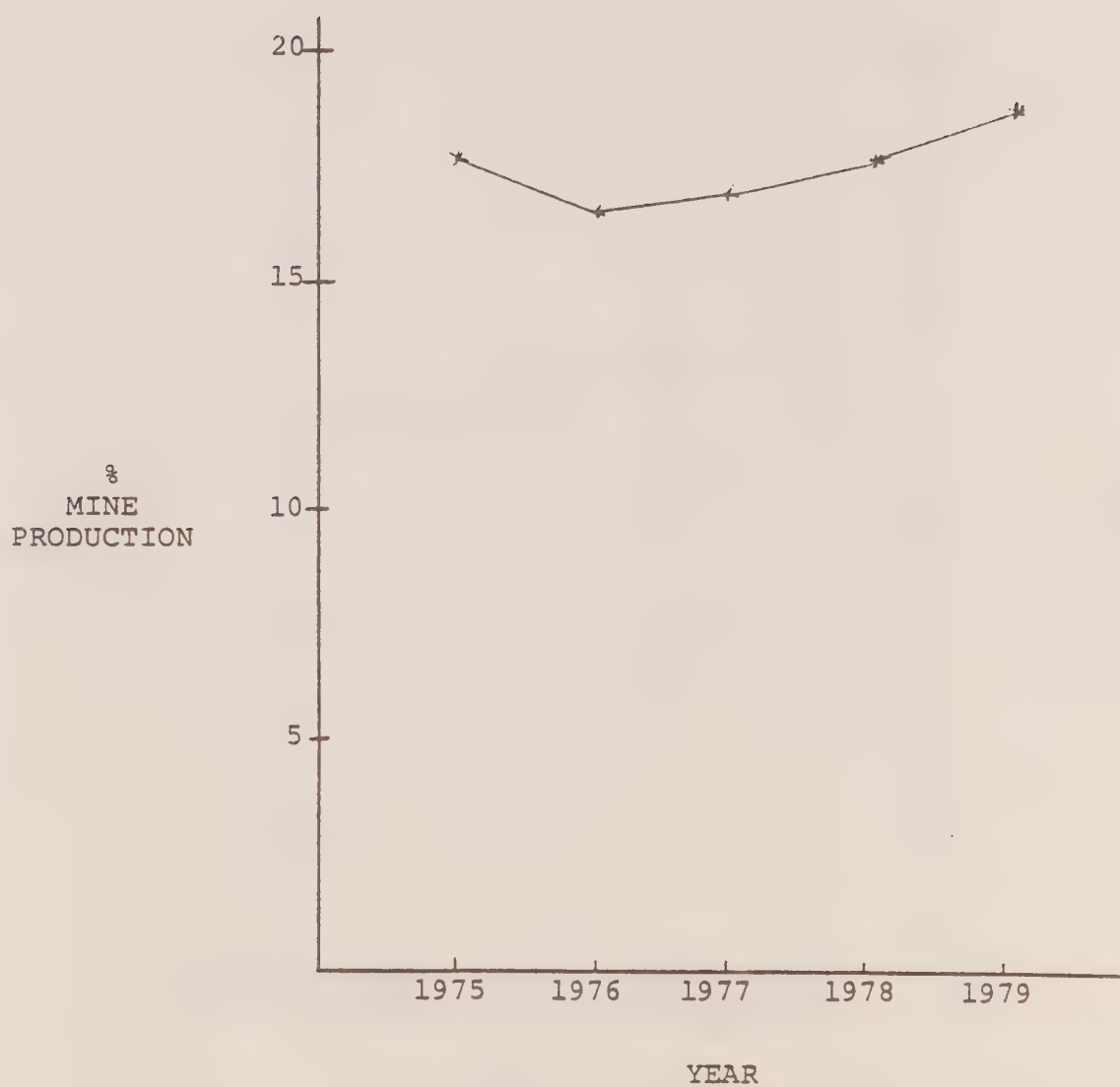


TABLE 59

PERCENTAGE WORLD MINE

PRODUCTION - ZINC

CANADA





dealt with by decision-makers while deliberating on this type of situation in future. If such activity poses a threat to the viability and competitiveness of the Canadian mining industry, is there some compelling reason for the Canadian government to subsidise foreign mining developments? If the answer to such a question is negative or only partially positive, then it might well be in our best interest to abstain from such activity.<sup>75</sup>

Even though this general conclusion of Canada's investment attractiveness may be correct, it does not apply, necessarily, to the position of Ontario. The recent constitutional discussions, the October 1980 federal budget and the reaction of Mr. Miller to the federal budget all indicate the tremendous regional variation involved in the Canadian economy. The question which follows from this is: is Ontario as attractive a location in which to invest as other parts of the country?

Tables 60 to 67 indicate that Ontario's share of total Canadian mineral production of copper, gold, iron ore, nickel and zinc has been and continues to decline. Ontario's share of Canadian lead production fluctuates from year to year over time. In the case of silver, fluctuation is also apparent, but a downward trend from the peak year of 1969 is obvious. Only in the case of platinum do the tables indicate an improvement in Ontario's status. The Tables also indicate that New Brunswick, Quebec, Ontario, Manitoba, and British Columbia, are the provinces in which the relevant mineral production is greatest.

TABLE 60

## Copper

## Canadian Metal Production by Province

## Percentage Distribution

YEARS.	1 NFLD.	2 N.S.	3 PEI.	4 N.B.	5 QUE.	6 ONT.	7 MAN.	8 SASK.	9 ALBT.	10 B.C.
1950	1. 1670	0. 0000	0. 0000	0. 0000	27. 8053	43. 8151	8. 0351	10. 8818	0. 0000	8. 2956
1951	1. 0739	0. 0000	0. 0000	0. 0000	25. 5087	47. 7120	5. 8669	11. 7143	0. 0000	8. 1238
1952	1. 1468	0. 1485	0. 0000	0. 0000	26. 6806	48. 5753	3. 6329	11. 7594	0. 0000	8. 0952
1953	1. 1110	0. 3112	0. 0000	0. 0000	21. 6859	51. 5622	3. 7162	12. 0783	0. 0000	9. 5352
1954	1. 1497	0. 3273	0. 0000	0. 0000	27. 7243	46. 5019	4. 0545	11. 9551	0. 0000	8. 2871
1955	0. 9361	0. 3152	0. 0000	0. 0109	30. 9885	44. 9109	5. 9447	10. 1061	0. 0000	6. 7876
1956	0. 8759	0. 1139	0. 0000	0. 0018	34. 4642	44. 0373	5. 0647	9. 3322	0. 0000	6. 1100
1957	1. 2630	0. 0000	0. 0000	1. 5979	31. 3022	47. 8136	5. 1658	8. 5202	0. 0000	4. 2913
1958	4. 2742	0. 0000	0. 0000	0. 0950	38. 0875	41. 1559	3. 6512	10. 8689	0. 0000	1. 7414
1959	3. 7921	0. 0000	0. 0000	0. 0000	34. 1316	47. 6314	3. 2750	8. 9904	0. 0000	2. 0546
1960	3. 1560	0. 0000	0. 0000	0. 0000	35. 8487	46. 9588	2. 9123	7. 2360	0. 0000	3. 7697
1961	3. 5874	0. 0000	0. 0000	0. 0000	33. 9356	48. 2015	2. 8364	7. 6247	0. 0000	3. 6087
1962	3. 7842	0. 0445	0. 0000	0. 8033	32. 2334	41. 3208	2. 7849	7. 0000	0. 0000	11. 9134
1963	3. 0963	0. 0524	0. 0000	1. 9807	31. 2445	39. 5440	3. 7520	6. 5785	0. 0000	13. 7480
1964	2. 7963	0. 0418	0. 0000	1. 9092	32. 4683	40. 6483	6. 1157	4. 1984	0. 0000	11. 8219
1965	2. 9187	0. 0368	0. 0000	1. 9850	34. 2480	42. 5836	6. 0659	3. 6883	0. 0000	8. 3810
1966	3. 8321	0. 0228	0. 0000	1. 4008	33. 9867	40. 1077	6. 1878	3. 8652	0. 0000	10. 4490
1967	3. 5814	0. 0046	0. 0000	0. 9434	27. 1289	45. 0252	4. 8197	3. 7460	0. 0000	14. 0742
1968	3. 6789	0. 0221	0. 0000	1. 3050	26. 4641	45. 8886	5. 4607	3. 4866	0. 0000	12. 7206
1969	3. 5698	0. 0033	0. 0000	1. 1846	27. 9232	41. 6593	6. 4714	3. 1802	0. 0000	14. 6024
1970	2. 2584	0. 0040	0. 0000	1. 1925	25. 6633	43. 8658	7. 1212	2. 8947	0. 0000	15. 7305
1971	1. 9378	0. 0023	0. 0000	1. 4230	25. 6190	41. 9126	7. 6604	1. 5449	0. 0000	19. 4488
1972	1. 1992	0. 0000	0. 0000	1. 2997	22. 2401	36. 5210	7. 5421	1. 5815	0. 0000	29. 4347
1973	0. 9520	0. 0004	0. 0000	1. 1352	17. 3788	31. 6351	7. 8540	1. 1257	0. 0000	38. 5470
1974	0. 6885	0. 0005	0. 0000	1. 3841	17. 5599	34. 5634	8. 6541	0. 9724	0. 0000	35. 0080
1975	1. 0221	0. 0000	0. 0000	1. 5279	16. 0196	35. 1279	8. 7888	1. 0772	0. 0000	35. 2288
1976	1. 0161	0. 0000	0. 0000	1. 4052	15. 4232	35. 5982	7. 4703	1. 3035	0. 0000	36. 2414
1977	1. 2007	0. 0000	0. 0000	1. 5823	14. 4362	36. 8617	7. 9181	0. 9517	0. 0000	41. 7679
1978	1. 6883	0. 0000	0. 0000	1. 6289	13. 4906	29. 5565	9. 2133	0. 9313	0. 0000	44. 5059
1979	1. 2152	0. 0000	0. 0000	1. 6953	12. 5301	28. 7203	9. 1912	0. 9089	0. 0000	

TABLE 61

Gold

Canadian Metal Production by Province

Percentage Distribution

YEARS.	1 NFLD.	2 N. S.	3 PEI.	4 N. B.	5 QUE.	6 ONT.	7 MAN.	8 SASK.	9 ALBT.	10 B. C.
1950	0. 1964	0. 0023	0. 0000	0. 0000	24. 7732	55. 4643	4. 4057	1. 7605	0. 0023	6. 5905
1951	0. 1935	0. 0023	0. 0000	0. 0000	24. 2966	56. 0690	3. 7311	2. 5087	0. 0023	6. 6017
1952	0. 1923	0. 0313	0. 0000	0. 0000	24. 8943	56. 2135	3. 1733	2. 0932	0. 0022	6. 1073
1953	0. 1899	0. 0789	0. 0000	0. 0000	25. 1917	53. 8107	3. 2374	2. 1772	0. 0025	6. 5340
1954	0. 1489	0. 0870	0. 0000	0. 0000	25. 1603	54. 0812	3. 0895	2. 3314	0. 0046	6. 1492
1955	0. 1387	0. 0859	0. 0000	0. 0000	25. 4183	55. 5482	2. 7279	1. 8406	0. 0044	5. 5702
1956	0. 1870	0. 0297	0. 0000	0. 0000	23. 6342	57. 3439	2. 7419	1. 8864	0. 0023	4. 4869
1957	0. 2210	0. 0023	0. 0000	0. 0045	24. 0623	58. 1475	2. 7064	1. 6960	0. 0090	5. 1670
1958	0. 2931	0. 0022	0. 0000	0. 0022	22. 8556	59. 4251	1. 9119	1. 8944	0. 0066	4. 6070
1959	0. 2989	0. 0000	0. 0000	0. 0000	22. 2911	59. 8519	1. 1420	1. 7531	0. 0045	4. 1107
1960	0. 2916	0. 0022	0. 0000	0. 0000	22. 3790	59. 0356	1. 1407	1. 8320	0. 0043	4. 5994
1961	0. 3219	0. 0000	0. 0000	0. 0000	23. 5599	58. 9601	1. 2227	1. 5826	0. 0045	3. 6770
1962	0. 3351	0. 0000	0. 0000	0. 0024	23. 7794	57. 9480	1. 6346	1. 5796	0. 0048	3. 8173
1963	0. 3073	0. 0000	0. 0000	0. 0275	22. 9122	58. 4272	1. 3265	1. 6187	0. 0025	3. 9844
1964	0. 4354	0. 0026	0. 0000	0. 0417	24. 3723	56. 1961	1. 8251	1. 2045	0. 0026	3. 6501
1965	0. 6572	0. 0000	0. 0000	0. 0471	25. 1082	53. 9656	1. 8774	1. 2812	0. 0055	3. 2668
1966	0. 7742	0. 0030	0. 0000	0. 0603	28. 1820	50. 0286	1. 9461	1. 2863	0. 0060	3. 6361
1967	0. 9142	0. 0033	0. 0000	0. 0469	27. 9677	50. 0753	1. 8049	1. 6040	0. 0033	4. 2461
1968	0. 2844	0. 0036	0. 0000	0. 0802	28. 0022	50. 3026	1. 4291	1. 6405	0. 0036	4. 5352
1969	0. 3536	0. 0039	0. 0000	0. 0550	29. 9163	48. 3164	1. 1002	1. 5559	0. 0039	4. 6285
1970	0. 2823	0. 0000	0. 0000	0. 2117	29. 1871	48. 2438	1. 4365	1. 8642	0. 0083	4. 2016
1971	0. 3229	0. 0000	0. 0000	0. 1858	28. 6106	50. 1615	1. 3314	1. 1501	0. 0044	3. 9545
1972	0. 6783	0. 0048	0. 0000	0. 1539	28. 9646	49. 0378	1. 8282	1. 4673	0. 0048	3. 8790
1973	0. 7317	0. 0000	0. 0000	0. 2661	24. 4947	47. 1934	2. 4561	1. 3560	0. 0102	9. 6761
1974	0. 6830	0. 0000	0. 0000	0. 2532	25. 9421	47. 1679	3. 0970	0. 8950	0. 0059	9. 5443
1975	0. 7862	0. 0060	0. 0000	0. 2056	27. 5218	45. 6640	2. 9088	0. 8829	0. 0121	9. 4521
1976	0. 8216	0. 0000	0. 0000	0. 2246	27. 4973	43. 7108	2. 5890	1. 0758	0. 0118	10. 2435
1977	0. 8306	0. 0000	0. 0000	0. 5365	27. 7803	42. 6915	2. 8223	0. 9806	0. 0058	11. 1271
1978	0. 9412	0. 0000	0. 0000	0. 4118	27. 3529	41. 7059	2. 8824	0. 8235	0. 0000	12. 0588
1979	0. 7590	0. 0000	0. 0000	0. 3795	27. 7672	39. 1524	2. 6565	0. 6958	0. 0000	16. 2555



TABLE 62

## Iron Ore

## Canadian Metal Production by Province

## Percentage Distribution

YEARS.	1 NFLD.	2 N.S.	3 PEI.	4 N.B.	5 QUE.	6 ONT.	7 MAN.	8 SASK.	9 ALBT.	10 B. C.
1950	32. 9509	0. 0000	0. 0000	0. 0000	0. 0000	67. 0491	0. 0000	0. 0000	0. 0000	0. 0000
1951	36. 8550	0. 0000	0. 0000	0. 0000	0. 0000	60. 7200	0. 0000	0. 0000	0. 0000	2. 4250
1952	31. 3726	0. 0000	0. 0000	0. 0000	0. 0000	51. 5479	0. 0000	0. 0000	0. 0000	17. 0815
1953	41. 2685	0. 0000	0. 0000	0. 0000	0. 0000	43. 5052	0. 0000	0. 0000	0. 0000	15. 2263
1954	51. 0555	0. 0000	0. 0000	0. 0000	8. 8350	32. 8312	0. 0000	0. 0000	0. 0000	7. 2770
1955	44. 2597	0. 0000	0. 0000	0. 0000	25. 1990	26. 7896	0. 0000	0. 0000	0. 0000	3. 7517
1956	37. 8713	0. 0000	0. 0000	0. 0000	35. 6023	24. 8708	0. 0000	0. 0000	0. 0000	1. 6556
1957	36. 7041	0. 0000	0. 0000	0. 0000	39. 8385	21. 8528	0. 0000	0. 0000	0. 0000	1. 6042
1958	34. 2789	0. 0000	0. 0000	0. 0000	38. 5361	23. 1777	0. 0000	0. 0000	0. 0000	4. 0079
1959	24. 9335	0. 0000	0. 0000	0. 0000	47. 0233	24. 5754	0. 0000	0. 0000	0. 0000	3. 4678
1960	35. 3184	0. 0000	0. 0000	0. 0000	34. 6066	24. 7100	0. 0000	0. 0000	0. 0000	5. 3655
1961	37. 3854	0. 0000	0. 0000	0. 0000	27. 7022	28. 3545	0. 0000	0. 0000	0. 0000	6. 5578
1962	29. 1922	0. 0000	0. 0000	0. 0000	40. 8045	23. 4465	0. 0000	0. 0000	0. 0000	6. 5564
1963	32. 1229	0. 0000	0. 0000	0. 0000	38. 6510	22. 3915	0. 0000	0. 0000	0. 0000	6. 8346
1964	33. 3029	0. 0000	0. 0000	0. 0000	40. 4764	20. 9958	0. 0000	0. 0000	0. 0000	5. 2252
1965	36. 2885	0. 0000	0. 0000	0. 0000	37. 0826	21. 2098	0. 0000	0. 0000	0. 0000	5. 4191
1966	40. 6633	0. 0000	0. 0000	0. 0000	34. 0333	20. 0151	0. 0000	0. 0000	0. 0000	5. 2882
1967	40. 1287	0. 0000	0. 0000	0. 0000	34. 3402	20. 4401	0. 0000	0. 0000	0. 0000	5. 0910
1968	41. 5344	0. 0000	0. 0000	0. 0000	31. 0602	22. 9900	0. 0000	0. 0000	0. 0000	4. 4152
1969	36. 7406	0. 0000	0. 0000	0. 0000	31. 9052	26. 2564	0. 0000	0. 0000	0. 0000	5. 0975
1970	45. 0346	0. 0000	0. 0000	0. 0000	28. 7642	22. 6006	0. 0000	0. 0000	0. 0000	3. 5908
1971	46. 3206	0. 0000	0. 0000	0. 0000	26. 1164	23. 6076	0. 0000	0. 0000	0. 0000	4. 0756
1972	42. 5976	0. 0000	0. 0000	0. 0000	27. 2026	27. 5309	0. 0000	0. 0000	0. 0000	2. 9423
1973	46. 5976	0. 0000	0. 0000	0. 0000	26. 6832	23. 7295	0. 0000	0. 0000	0. 0000	2. 9900
1974	47. 0810	0. 0000	0. 0000	0. 0000	26. 8146	23. 3107	0. 0000	0. 0000	0. 0000	2. 7934
1975	50. 3101	0. 0000	0. 0000	0. 0000	25. 6200	21. 1702	0. 0000	0. 0000	0. 0000	2. 8998
1976	48. 2835	0. 0000	0. 0000	0. 0000	31. 2603	18. 1909	0. 0000	0. 0000	0. 0000	2. 2652
1977	49. 7157	0. 0000	0. 0000	0. 0000	30. 2084	19. 2456	0. 0000	0. 0000	0. 0000	0. 8305
1978	39. 9556	0. 0000	0. 0000	0. 0000	34. 8246	23. 7865	0. 0000	0. 0000	0. 0000	1. 4333
1979	49. 7927	0. 0000	0. 0000	0. 0000	35. 5184	13. 5659	0. 0000	0. 0000	0. 0000	1. 1230

TABLE 63

Lead

Canadian Metal Production by Province

Percentage Distribution

YEARS.	1 Nfld.	2 N.S.	3 PEI.	4 N.B.	5 QUE.	6 ONT.	7 MAN.	8 SASK.	9 ALBT.	10 B. C.
1950	10. 5430	0. 0000	0. 0000	0. 0000	4. 4827	0. 0000	0. 0000	0. 0000	0. 0000	81. 4425
1951	10. 3924	0. 0000	0. 0000	0. 0000	4. 9019	0. 0000	0. 0000	0. 0000	0. 0000	80. 7453
1952	10. 6959	0. 4610	0. 0000	0. 0000	6. 2306	0. 5341	0. 0000	0. 0000	0. 0000	76. 6307
1953	9. 1384	0. 9427	0. 0000	0. 0000	4. 7685	0. 1695	0. 0000	0. 0000	0. 0000	76. 8265
1954	8. 4789	0. 9579	0. 0000	0. 0000	3. 5781	0. 6443	0. 0000	0. 0000	0. 0000	78. 6139
1955	8. 8058	0. 9812	0. 0000	0. 3780	2. 7658	0. 9503	0. 0000	0. 0000	0. 0000	79. 6461
1956	12. 0664	0. 3764	0. 0000	0. 2513	1. 5212	0. 7970	0. 0000	0. 0000	0. 0000	78. 2090
1957	13. 5062	0. 0000	0. 0000	0. 6447	1. 4926	0. 2790	0. 0000	0. 0000	0. 0000	77. 1937
1958	12. 8457	0. 0000	0. 0000	0. 0504	1. 6872	0. 6731	0. 0000	0. 0000	0. 0000	78. 9673
1959	12. 0286	0. 0000	0. 0000	0. 0000	1. 5584	0. 8630	0. 0000	0. 0000	0. 0000	79. 7672
1960	11. 6810	0. 0000	0. 0000	0. 0000	1. 2981	0. 4041	0. 5044	0. 0000	0. 0000	81. 1801
1961	9. 5334	0. 0000	0. 0000	0. 0000	0. 0000	1. 4721	0. 3625	1. 3252	0. 0000	83. 6681
1962	11. 7635	1. 2454	0. 0000	0. 8728	2. 1901	0. 5311	1. 7611	0. 0000	0. 0000	77. 8534
1963	11. 6283	0. 6961	0. 0000	0. 8864	2. 1557	0. 7650	1. 3607	0. 0000	0. 0000	78. 2877
1964	12. 4755	0. 8192	0. 0000	10. 6598	1. 9412	0. 9952	0. 6357	0. 0000	0. 0000	65. 9586
1965	7. 5103	0. 6311	0. 0000	14. 9598	1. 4438	0. 6661	0. 4510	0. 0000	0. 0000	42. 8936
1966	7. 2364	0. 4950	0. 0000	17. 2523	1. 3003	0. 6604	0. 1852	0. 0000	0. 0000	35. 1761
1967	6. 2713	0. 1249	0. 0000	14. 7867	0. 9063	1. 7390	0. 5614	0. 4905	0. 0000	32. 6537
1968	5. 5601	0. 7643	0. 0000	15. 9770	0. 8632	3. 7923	0. 4342	0. 7827	0. 0000	33. 9785
1969	6. 9695	0. 8583	0. 0000	16. 0349	0. 4888	3. 7964	0. 1758	0. 8982	0. 0000	32. 9648
1970	4. 5557	0. 3337	0. 0000	16. 1041	0. 5547	3. 0731	0. 1298	0. 0000	0. 0000	27. 6011
1971	3. 3284	0. 1024	0. 0000	16. 1490	0. 1597	2. 2013	0. 0498	0. 0000	0. 0000	30. 4076
1972	3. 3031	0. 0000	0. 0000	12. 3138	0. 4536	2. 8708	0. 0529	0. 0000	0. 0000	26. 4126
1973	3. 2401	0. 0774	0. 0000	11. 6760	0. 3585	3. 0498	0. 0169	0. 0000	0. 0000	24. 8254
1974	4. 7754	0. 0668	0. 0000	16. 2535	0. 3256	3. 1170	0. 0135	0. 0000	0. 0000	18. 7764
1975	1. 4947	0. 0000	0. 0000	16. 9255	0. 4710	1. 7736	0. 0341	0. 0000	0. 0000	20. 2249
1976	5. 0271	0. 0000	0. 0000	25. 3814	0. 3177	2. 6942	0. 1065	0. 0000	0. 0000	33. 3204
1977	3. 9498	0. 0000	0. 0000	19. 7629	0. 0467	2. 8967	0. 1552	0. 0000	0. 0000	27. 8240
1978	2. 6347	0. 0000	0. 0000	22. 9876	0. 0736	2. 1308	0. 1832	0. 0000	0. 0000	23. 1090
1979	1. 8560	0. 0000	0. 0000	23. 9660	0. 0682	2. 7297	0. 0973	0. 0000	0. 0000	27. 7601

TABLE 64

## Nickel

## Canadian Metal Production by Province

## Percentage Distribution

YEARS.	1 Nfld.	2 N.S.	3 PEI.	4 N.B.	5 QUE.	6 ONT.	7 MAN.	8 SASK.	9 ALBT.	10 B.C.
1950	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1951	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1952	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1953	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1954	0.0000	0.0000	0.0000	0.0000	0.0000	97.9728	2.0272	0.0000	0.0000	0.0000
1955	0.0000	0.0000	0.0000	0.0000	0.0000	92.1298	7.8702	0.0000	0.0000	0.0000
1956	0.0000	0.0000	0.0000	0.0000	0.0000	93.8723	6.1277	0.0000	0.0000	0.0000
1957	0.0000	0.0000	0.0000	0.0000	0.0000	94.3807	5.3383	0.0000	0.0000	0.0000
1958	0.0000	0.0000	0.0000	0.0000	0.0000	91.1039	7.0063	0.0000	0.0000	0.5046
1959	0.0000	0.0000	0.0000	0.0000	0.0000	93.2511	5.4348	0.0000	0.0000	0.2845
1960	0.0000	0.0000	0.0000	0.0000	0.0000	94.0066	4.2234	0.0000	0.0000	0.8811
1961	0.0000	0.0000	0.0000	0.0000	0.0000	84.2168	14.1544	0.0000	0.0000	0.8972
1962	0.0000	0.0000	0.0000	0.0000	0.6631	71.7276	26.4731	0.0000	0.0000	0.7485
1963	0.0000	0.0000	0.0000	0.0000	1.1546	68.6953	29.2978	0.0000	0.0000	0.8523
1964	0.0000	0.0000	0.0000	0.0000	1.0213	70.9393	27.2936	0.0000	0.0000	0.7437
1965	0.0000	0.0000	0.0000	0.0000	1.1673	73.8027	24.3891	0.0000	0.0000	0.6409
1966	0.0000	0.0000	0.0000	0.0000	1.7778	71.6490	25.8538	0.0066	0.0000	0.7128
1967	0.0000	0.0000	0.0000	0.0000	0.6524	76.4371	22.0046	0.0652	0.0000	0.8407
1968	0.0000	0.0000	0.0000	0.0000	0.3350	77.0722	21.9107	0.0546	0.0000	0.6274
1969	0.0000	0.0000	0.0000	0.0000	0.0727	68.7138	30.3916	0.1247	0.0000	0.6973
1970	0.0000	0.0000	0.0000	0.0000	0.2620	73.3142	25.8666	0.0000	0.0000	0.5571
1971	0.0000	0.0000	0.0000	0.0000	0.2542	73.3003	26.0134	0.0000	0.0000	0.2775
1972	0.0000	0.0000	0.0000	0.0000	0.1179	73.1416	25.5714	0.0000	0.0000	0.6256
1973	0.0000	0.0000	0.0000	0.0000	0.1319	71.6310	27.1676	0.0000	0.0000	0.4494
1974	0.0000	0.0000	0.0000	0.0000	0.0000	77.6938	22.0502	0.0000	0.0000	0.2559
1975	0.0000	0.0000	0.0000	0.0000	0.0000	73.9512	26.0488	0.0000	0.0000	0.0000
1976	0.0000	0.0000	0.0000	0.0000	0.0000	77.8308	22.1692	0.0000	0.0000	0.0000
1977	0.0000	0.0000	0.0000	0.0000	0.0000	77.4130	22.5869	0.0000	0.0000	0.0000
1978	0.0000	0.0000	0.0000	0.0000	0.0000	74.8885	25.1115	0.0000	0.0000	0.0000
1979	0.0000	0.0000	0.0000	0.0000	0.0000	72.1082	27.8918	0.0000	0.0000	0.0000



Platinum

Canadian Metal Production by Province

Percentage Production

YEARS.	1 NFLD.	2 N. S.	3 PEI.	4 N. B.	5 QUE.	6 ONT.	7 MAN.	8 SASK.	9 ALBT.	10 B. C.
1950	0.0000	0.0000	0.0000	0.0000	0.0000	99.9405	0.0000	0.0000	0.0000	0.0595
1951	0.0000	0.0000	0.0000	0.0000	0.0000	99.9857	0.0000	0.0000	0.0000	0.0143
1952	0.0000	0.0000	0.0000	0.0000	0.0000	99.9984	0.0000	0.0000	0.0000	0.0016
1953	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1954	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1955	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1956	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1957	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1958	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1959	0.0000	0.0000	0.0000	0.0000	0.0000	99.9973	0.0000	0.0000	0.0000	0.0027
1960	0.0000	0.0000	0.0000	0.0000	0.0000	99.9961	0.0000	0.0000	0.0000	0.0000
1961	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1962	0.0000	0.0000	0.0000	0.0000	0.0000	99.9989	0.0000	0.0000	0.0000	0.0011
1963	0.0000	0.0000	0.0000	0.0000	0.0000	99.9994	0.0000	0.0000	0.0000	0.0006
1964	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1965	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1966	0.0000	0.0000	0.0000	0.0000	0.0000	99.9730	0.0000	0.0270	0.0000	0.0000
1967	0.0000	0.0000	0.0000	0.0000	0.0000	99.6511	0.0000	0.3489	0.0000	0.0000
1968	0.0000	0.0000	0.0000	0.0000	0.0000	99.7855	0.0000	0.2145	0.0000	0.0000
1969	0.0000	0.0000	0.0000	0.0000	0.0000	99.3753	0.0000	0.6247	0.0000	0.0000
1970	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1971	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1972	0.0000	0.0000	0.0000	0.0000	0.0000	99.1072	0.0000	0.0000	0.0000	0.0000
1973	0.0000	0.0000	0.0000	0.0000	0.0000	99.6290	0.0000	0.0000	0.0000	0.0000
1974	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1975	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1976	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1977	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1978	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000
1979	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	0.0000

TABLE 66

## Silver

## Canadian Metal Production by Province

## Percentage Production

YEARS.	1 Nfld.	2 N.S.	3 PEI.	4 N.B.	5 QUE.	6 ONT.	7 MAN.	8 SASK.	9 ALBT.	10 B.C.
1950	5450	0.0004	0.0000	0.0000	19.5760	19.1433	4.0243	5.2939	0.0004	39.9756
1951	2.3113	0.0004	0.0000	0.0000	17.9639	19.5457	2.6512	6.2886	0.0004	36.0740
1952	2.5315	0.3644	0.0000	0.0000	17.9849	25.7357	1.6339	4.6764	0.0004	30.8657
1953	2.2912	0.7993	0.0000	0.0000	16.1538	18.2146	1.5177	4.4439	0.0004	32.8945
1954	2.3848	0.8432	0.0000	0.0000	15.7700	17.4938	1.3211	4.7381	0.0003	34.7890
1955	3.5078	0.9366	0.0000	0.0897	17.1050	21.6229	1.6241	4.3961	0.0004	31.0965
1956	3.3663	0.3267	0.0000	0.0640	14.2939	23.3063	1.5127	4.1471	0.0004	30.9562
1957	4.1508	0.0003	0.0000	1.3156	12.6491	23.9740	1.4148	3.9746	0.0003	29.7849
1958	4.0660	0.0003	0.0000	0.1640	12.5416	31.4961	1.0294	4.1687	0.0003	25.7141
1959	4.5243	0.0000	0.0000	0.0000	12.8687	33.0187	1.1709	3.7195	0.0003	23.3783
1960	3.7367	0.0000	0.0000	0.0000	12.0970	32.9861	1.4746	3.4213	0.0003	24.8330
1961	3.6489	0.0000	0.0000	0.0000	13.7525	28.2659	2.4457	2.7927	0.0003	26.7402
1962	3.8839	2.3804	0.0000	0.5867	13.1300	30.8431	2.7870	2.5053	0.0003	20.3363
1963	3.2774	1.4139	0.0000	1.1109	14.8390	32.0780	2.5625	2.4947	0.0003	21.5529
1964	3.6442	1.8199	0.0000	4.9133	15.2649	33.2075	2.4332	1.9841	0.0003	17.6577
1965	3.3682	1.3745	0.0000	8.5066	15.9715	33.5338	2.1907	1.9862	0.0003	15.4655
1966	3.2839	1.6180	0.0000	9.3025	15.6027	32.6178	1.6392	1.8056	0.0003	16.6043
1967	2.9552	0.2456	0.0000	8.3089	12.8299	39.4033	1.7329	1.6665	0.0003	16.7495
1968	1.9899	0.8184	0.0000	8.1179	8.8561	48.5298	1.3707	1.5460	0.0002	15.8204
1969	2.3537	0.6147	0.0000	9.3244	9.9582	51.1370	1.0632	1.4925	0.0002	13.2331
1970	1.7930	0.1620	0.0000	10.3456	9.6315	44.9176	1.4933	1.1118	0.0002	14.7145
1971	1.2246	0.1202	0.0000	10.9891	9.5125	40.5913	1.5086	0.5189	0.0002	16.6745
1972	1.2790	0.0002	0.0000	8.7214	7.9433	43.7302	1.8048	0.8582	0.0000	15.4625
1973	1.2064	0.0480	0.0000	7.5150	4.4248	41.3106	2.2802	0.9649	0.0002	16.0450
1974	1.2981	0.0589	0.0000	10.4287	6.9386	41.7018	2.9605	0.5260	0.0002	13.6464
1975	1.1211	0.0000	0.0000	12.7204	8.5581	37.5570	2.5233	0.6754	0.0003	15.9269
1976	1.4042	0.0000	0.0000	15.0093	7.1446	39.6057	2.9976	0.8117	0.0002	18.6929
1977	1.3633	0.0000	0.0000	11.5691	7.0776	39.9125	1.2476	0.7382	0.0002	18.3853
1978	1.2771	0.0000	0.0000	14.8323	6.0604	34.9045	2.3065	0.6347	0.0000	17.5490
1979	0.9562	0.0000	0.0000	16.5756	5.1067	36.9523	2.2617	0.5779	0.0000	19.6674

TABLE 67

## Zinc

## Canadian Metal Production by Province

## Percentage Distribution

YEARS.	1 Nfld.	2 N.S.	3 PEI.	4 N.B.	5 QUE.	6 ONT.	7 MAN.	8 SASK.	9 ALBT.	10 B. C.
1950	9. 8267	0. 0000	0. 0000	0. 0000	27. 3504	0. 0000	6. 9445	8. 6618	0. 0000	46. 6543
1951	8. 3460	0. 0000	0. 0000	0. 0000	25. 3180	0. 0000	4. 4298	11. 6015	0. 0000	49. 8722
1952	8. 2078	1. 1856	0. 0000	0. 0000	25. 5239	0. 1002	4. 0593	12. 5579	0. 0000	46. 8765
1953	6. 9698	1. 8293	0. 0000	0. 0000	24. 9973	0. 0214	3. 9243	12. 4364	0. 0000	47. 5781
1954	7. 9690	2. 2557	0. 0000	0. 0000	28. 4207	0. 1886	4. 3170	13. 4584	0. 0000	40. 2504
1955	6. 6079	1. 8502	0. 0000	0. 0000	23. 4059	0. 3572	4. 1458	11. 2979	0. 0000	49. 8171
1956	8. 2057	0. 4941	0. 0000	0. 1255	20. 3422	0. 2904	4. 2364	10. 7374	0. 0000	53. 0776
1957	8. 6282	0. 0000	0. 0000	0. 8009	17. 9568	2. 7302	3. 3183	10. 8933	0. 0000	53. 6034
1958	7. 9675	0. 0000	0. 0000	0. 7438	13. 3904	10. 8773	3. 7081	11. 3686	0. 0000	51. 1186
1959	7. 9984	0. 0000	0. 0000	0. 0000	11. 8831	11. 3588	3. 9652	11. 8373	0. 0000	51. 2847
1960	8. 4075	0. 0000	0. 0000	0. 0000	12. 2415	11. 1164	5. 9946	10. 4953	0. 0000	50. 0975
1961	8. 3265	0. 0000	0. 0000	0. 0000	13. 9818	12. 4847	11. 1799	6. 8172	0. 0000	46. 7510
1962	7. 0261	0. 1634	0. 0000	0. 5394	15. 2732	13. 6318	10. 7785	6. 6717	0. 0000	44. 6231
1963	7. 2797	0. 0000	0. 0000	2. 2406	15. 8499	14. 0314	9. 7931	7. 0336	0. 0000	42. 5210
1964	5. 6948	0. 0869	0. 0000	7. 9431	34. 5560	10. 5296	6. 2299	4. 1544	0. 0000	29. 2761
1965	4. 4022	0. 0364	0. 0000	15. 0352	33. 1960	7. 3810	4. 9589	3. 4041	0. 0000	19. 2614
1966	3. 5432	0. 0703	0. 0000	14. 7697	30. 4061	8. 5462	3. 6268	2. 9986	0. 0000	15. 8242
1967	3. 1357	0. 0021	0. 0000	13. 6179	22. 1227	24. 1605	3. 2622	2. 5563	0. 0000	11. 6013
1968	3. 1680	0. 0097	0. 0000	11. 6811	22. 3849	29. 9086	3. 9272	2. 5024	0. 0000	12. 2831
1969	2. 7246	0. 0109	0. 0000	12. 6470	16. 4398	29. 8343	4. 0484	2. 0820	0. 0000	12. 2831
1970	2. 3894	0. 0000	0. 0000	12. 8678	16. 3774	27. 1778	3. 1522	1. 7439	0. 0000	11. 0068
1971	1. 6670	0. 0000	0. 0000	12. 9239	13. 9565	29. 2642	1. 9993	0. 6919	0. 0000	12. 2206
1972	2. 1221	0. 0000	0. 0000	13. 9334	13. 0320	32. 2032	3. 6409	1. 3272	0. 0000	10. 7113
1973	0. 6431	0. 0000	0. 0000	14. 2420	11. 4830	33. 7529	4. 9107	0. 9928	0. 0000	11. 2004
1974	1. 6940	0. 0000	0. 0000	13. 2926	11. 1310	38. 6423	5. 5443	0. 5237	0. 0000	6. 8974
1975	3. 0515	0. 0000	0. 0000	14. 1411	11. 8695	31. 8298	6. 0697	0. 4302	0. 0000	9. 4459
1976	4. 3275	0. 0000	0. 0000	13. 7194	11. 9920	32. 2989	6. 1669	0. 8035	0. 0000	10. 8445
1977	4. 8489	0. 0000	0. 0000	17. 5801	9. 3045	27. 5960	5. 7470	0. 7029	0. 0000	9. 8837
1978	5. 1973	0. 0000	0. 0000	16. 6226	9. 0911	24. 6884	5. 5514	0. 6151	0. 0000	9. 8837
1979	4. 4314	0. 0000	0. 0000	23. 0370	7. 1807	24. 0458	4. 0277	0. 3160	0. 0000	7. 9225



In terms of the question raised above, a revision is in order. Is Ontario as attractive a mineral development investment location as these five other provinces?

To provide a thorough response to such a question would require a major study and the investigation of a number of factors such as transportation, energy, labour supply and other important elements. In part, some of these issues may be addressed in other reports. The issue of taxation of mining properties is one which deserves particular attention. Because this issue is not addressed in any of the other technical reports, I have felt obliged to discuss it in this presentation.

#### Mining Taxation:

The simplest method by which a comparison can be made is to use the example provided by Price, Waterhouse in Canadian Mining Taxation. Their calculations indicate that on \$3,000 of revenue the following amounts would be paid in mining taxes.<sup>76</sup>

Ontario	\$187
Manitoba	\$168
Quebec	\$177
British Columbia	\$156

Unfortunately the Price Waterhouse example is not applied to New Brunswick and thus no conclusion can be drawn insofar as mining taxation in that province is concerned.

What is immediately apparent is that the mining tax levy for Ontario is higher than that of any of the three other provinces. If an investor used mining taxation levels as a basis for his investment and if all other conditions were equal, then clearly, Ontario would be a less attractive investment location than Manitoba, Quebec or British Columbia.

Fortunately for Ontario, mining taxes are not the only taxes paid by mining companies which operate in Canada. A second Price Waterhouse calculation demonstrates the effect of provincial income tax rates, provincial mining tax rates, and federal income tax rates on a hypothetical new mine over a ten year period with an accounting income of \$10,000.

In summary form, the results are as follows:

Ontario:

	<u>\$</u>	<u>% of accounting income</u>
federal income tax	2,070	20.70
Ontario income tax	867	8.67
Ontario mining tax	<u>1,679</u>	<u>16.79</u>
	4,616	46.16

Quebec:

	<u>\$</u>	<u>% of accounting income</u>
federal income tax	2,070	20.70
Quebec income tax	690	6.90
Quebec mining tax	<u>1,770</u>	<u>17.70</u>
	4,530	45.30

British Columbia:

	<u>\$</u>	<u>% of accounting income</u>
federal income tax	2,070	20.70
B.C. income tax	1,313	13.13
B.C. mining tax	<u>1,560</u>	<u>15.60</u>
	4,943	49.43

Manitoba:

	<u>\$</u>	<u>% of accounting income</u>
federal income tax	2,070	20.70
Manitoba income tax	863	8.63
Manitoba mining royalty taxes	<u>1,680</u>	<u>16.80</u>
	4,613	46.13

This example leads to somewhat different conclusions than those of the previous example. In this case, if our investor used federal and provincial taxes as a basis for his investment decision and if all other conditions were equal, then clearly, he would invest in Quebec before Ontario.

What these examples show is that in comparison with three other mineral producing provinces, Ontario's tax system gives it an advantage over only one-British Colombia. If the Ontario government wishes to attract mining investment to the province and if it wishes to use provincial taxation as a means of attracting such investment, then the government is going to have to reduce its taxation levels. If the Ontario government were to establish the type of mining taxation rates applied in British Columbia, it might improve its investment attractiveness considerably.<sup>78</sup>

In more general terms it must be stated that Ontario political history has been very stable over the past few decades. Historically, Ontario has maintained a strong economy. Although the current energy issues of supply and price are of particular concern to the province, it should be emphasized that there is no obvious reason to assume that Ontario will not continue to be an attractive investment location. In terms of the mining industry, however, some changes in provincial mining taxation



might make it even more attractive to investors.

Footnotes

<sup>1</sup>R.J. Rummel and David Heenan, "How Multi-nationals Analyze Political Risk," Harvard Business Review. Jan. - Feb. 1978, p. 68.

<sup>2</sup>L. Kraar, "The Multi-nationals Get Smarter About Political Risks," Fortune, March 24, 1980, p. 86.

<sup>3</sup>D. Haendel, G. West and R. Meadow, Overseas Investment and Political Risk (Philadelphia: Foreign Policy Research Institute, 1975), pp. 37-38.

<sup>4</sup>F.R. Root, "Analyzing Political Risks in International Business" in A. Kapoor and P. Grut eds., Multi-national Enterprise in Transition. (Detroit: Darwin Press, 1972), p. 57.

<sup>5</sup>S.H. Robock, "Political Risk: Identification and Assessment," Columbia Journal of World Business, July-August 1971, p. 7.

<sup>6</sup>op. cit., p. 43

<sup>7</sup>Ibid., p. X1

<sup>8</sup>op. cit., p. 87

<sup>9</sup>op. cit., p. 70

<sup>10</sup>Kraar, op. cit., p. 95

<sup>11</sup>op. cit., p. 70

<sup>12</sup>op. cit., p. 12

<sup>13</sup>op. cit., pp. 71-72

<sup>14</sup>I.S. Friedman, "Country Risk: The Lessons of Zaire," Banker, Feb. 1978, p. 31.

<sup>15</sup>See Appendix A for the basic information

<sup>16</sup>D. Haendel et al., op. cit., p. 63.

<sup>17</sup>Metal Statistics, 1973

<sup>18</sup>Time, January 14, 1980, p. 46.

<sup>19</sup> Ibid.

<sup>20</sup> L. Kraar, op. cit., p. 88.

<sup>21</sup> Ibid

<sup>22</sup> J. Sachdev, "Foreign Investment Policies of Developing Host Nations and Multinationals," Management International Review, Vol. 18, 1978, p. 38.

<sup>23</sup> Rummel and Heenan, op. cit.

<sup>24</sup> L. Kraar, op. cit., p. 95.

<sup>25</sup> Ibid., pp. 88 and 95.

<sup>26</sup> Sachdev, op. cit., p. 39.

<sup>27</sup> F.T. Haner, "Rating Investment Risks Abroad," Business Horizons, April 1979, pp. 18-24.

<sup>28</sup> cited in A.H. Parbo, "Minerals for the Future - Some Issues," Presidential Address, ANZAAS Congress, May 14, 1980, p. 9.

<sup>29</sup> H. Nickel, "The Case for Doing Business in South Africa," Fortune, June 19, 1978, p. 60.

<sup>30</sup> A.H. Parbo, op. cit., 8

<sup>31</sup> Ibid

<sup>32</sup> Ibid

<sup>33</sup> Ambassador K. Curtis, Question Period, August 3, 1980

<sup>34</sup> "King Who is Both Shah and Ayatollah", The Economist, February 23, 1980, p. 40.

<sup>35</sup> See Appendix B.

<sup>36</sup> "Trees Go, Kalabule Stays", The Economist, September 8, 1979, p. 95.

<sup>37</sup>"Out of the Abyss", The Economist, November 24, 1979, p.95.

<sup>38</sup>"Trees Go, Kalabule Stays", p. 70.

<sup>39</sup>See Appendix B.

<sup>40</sup>"Oh, Brazil", The Economist, August 4, 1979, p. 5-8.

<sup>41</sup>"Fasten Seat Belts", The Banker, February, 1980, p. 18.

<sup>42</sup>"Oh Brazil", op. cit.

<sup>43</sup>See Appendix B.

<sup>44</sup>A. Rowley, "A Lean Year for the Philippines", The Banker, April/May 1980, p. 138.

<sup>45</sup>A. Rowley, "A Lean Year ... ", p. 137.

<sup>46</sup>See Appendix B.

<sup>47</sup>B. Caplan, "Zimbabwe Seeks New Friends", The Banker, April/May 1980, p. 55.

<sup>48</sup>B. Caplan, "Zimbabwe Seeks ... ", p. 54.

<sup>49</sup>See Appendix B.

<sup>50</sup>"Vengeful Course", The Economist, April 26, 1980, p. 36.

<sup>51</sup>See Appendix B.

<sup>52</sup>"Can Technology Revive Sweden's Economy?", The Economist, November 24, 1979, p. 109.

<sup>53</sup>H.G. Jones, "Sweden's Sober Dawn", Management Today, July 1980, p. 70.

<sup>54</sup>See Appendix B.

<sup>55</sup>J. Ross-Skinner and S. Antilla, "Germany: Why It Thrives", Dun's Review, December 1979, pp. 106-110.

<sup>56</sup>See Appendix B.

<sup>57</sup>G.E. Wood, "Copper", Canadian Mining Journal, February, 1980, p. 73.

<sup>58</sup>"Staying Sheltered", The Economist, March 22, 1980, p. 70.

<sup>59</sup>See Appendix B.

<sup>60</sup>See Appendix B.

<sup>61</sup>T. Barnett, "Politics and Planning Rhetoric in Papua-New Guinea", Economic Development and Cultural Change. July, 1979, pp. 769-784.

<sup>62</sup>T. Barnett, "Politics and Planning....", p. 779.

<sup>63</sup>See Appendix B.

<sup>64</sup>"Mrs. Gandhi's Inheritance", The Economist, January 19, 1980, p. 62.

<sup>65</sup>"Mrs. Gandhi's....", p. 62.

<sup>66</sup>"India's FERA to regulate, not repel MNS", Advertising Age, March 12, 1979, pp. 1 ff.

<sup>67</sup>See Appendix B.

<sup>68</sup>J. Dahlby in Dun's Review, July 1979, p. 70.

<sup>69</sup>H. Kahn, "Three Scenarios for Japan's Role in the 1980's", Dun's Review, July 1979, pp. 70-72.

<sup>70</sup>See Appendix B.

<sup>71</sup>T. Dahlby, p. 70.

<sup>72</sup>"The Dominican Republic: A Businessmen's Dialogue", The Nation's Business, September 1979, p. 4 DR.

<sup>73</sup>See Appendix B.

<sup>74</sup>See Appendix B.

<sup>75</sup>See J.P. Drolet, "Minerals and Other Political Issues", address to the Toronto Branch of CIM, 13 September, 1978, for a fairly balanced perspective on this issue.

<sup>76</sup>Price-Waterhouse and Co., Canadian Mining Taxation, September 1979. See especially pp. 18-33.

<sup>77</sup>Price-Waterhouse and Co., Canadian Mining Taxation,  
Appendix A.

<sup>78</sup>It must be noted that this conclusion applies only under the certibus paribus assumption indicated in the text and only if the government wished to use the tax system as a means of encouraging additional investment in mineral development.



APPENDIX A  
Percentage World Mine  
Production By Country  
For Eight Minerals

TABLE A-1

## PERCENTAGE WORLD MINE PRODUCTION

LEAD 1975-1979

<u>COUNTRY</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
AUSTRALIA	10.8	11.4	12.1	11.3	12.0
BULGARIA	3.0	3.2	3.3	3.3	3.3
CANADA	9.8	7.4	7.9	9.1	8.8
CHINA	3.9	4.0	4.2	4.3	4.2
MEXICO	5.0	5.8	4.6	4.8	4.8
MOROCCO	2.0	1.9	3.0	3.1	3.0
NORTH KOREA	3.4	3.2	3.1	3.0	2.9
PERU	5.0	5.2	5.1	5.2	5.2
USSR	16.8	17.2	17.5	17.0	16.7
U.S.	15.8	15.8	15.0	15.0	14.5
YUGOSLAVIA	3.6	3.5	3.7	3.6	3.6

Source: Derived from: American Bureau of Metal Statistics,  
Non-Ferrous Metal Data 1979 (New York: ABMS, 1980), p.45

TABLE A-2  
PERCENTAGE WORLD MINE PRODUCTION  
ZINC 1975-1979

<u>COUNTRY</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
CANADA	17.8	16.4	16.9	17.2	18.4
CHINA	2.3	2.3	2.4	2.4	2.4
JAPAN	4.3	4.4	4.4	4.5	4.0
MEXICO	3.8	4.5	4.2	4.2	3.9
NORTH KOREA	2.7	2.5	2.4	2.4	2.4
PERU	6.2	7.6	7.6	7.4	7.9
POLAND	3.2	3.0	3.5	3.5	3.5
SWEDEN	1.9	2.2	2.3	2.7	2.7
USSR	17.4	17.0	16.5	16.7	16.6
US	7.2	7.3	6.5	4.9	4.2
WEST GERMANY	2.5	2.4	2.3	2.0	2.0

Source: Derived from:  
American Bureau of Metal Statistics,  
Non-Ferrous Metal Data 1979. (New York: ABMS, 1980), p.67.

TABLE A-3

PERCENTAGE WORLD MINE PRODUCTION  
PLATINUM 1975-1979

<u>COUNTRY</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
AUSTRALIA	0.03	0.03	0.03	0.2	0.2
CANADA	7.0	7.0	7.4	5.5	2.8
COLOMBIA	0.4	0.3	0.3	0.3	0.3
JAPAN	0.4	0.5	0.6	0.6	0.6
SOUTH AFRICA	45.5	45.3	45.6	45.2	48.1
USSR	46.4	46.9	46.1	48.2	48.1
U.S.	0.4	0.1	0.08	0.2	0.1
YUGOSLAVIA	--	--	0.09	0.09	0.09

Source: Derived from:  
American Bureau of Metal Statistics,  
Non-Ferrous Metal Data, 1979. (New York: ABMS, 1980)p.123.

TABLE A-4

## PERCENTAGE WORLD MINE PRODUCTION

## NICKEL 1975-1979

<u>COUNTRY</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
AUSTRALIA	9.4	10.1	11.2	12.8	10.8
CANADA	30.0	29.4	30.5	20.2	19.5
CUBA	4.6	4.5	4.8	5.8	5.5
DOMINICAN REPUBLIC	3.4	3.0	3.2	2.3	3.7
INDONESIA	2.4	2.5	1.8	5.0	5.3
NEW CALEDONIA	16.6	14.5	14.2	9.3	10.9
PHILIPPINES	1.2	2.3	2.0	4.9	5.4
RHODESIA	1.3	2.0	2.1	2.5	2.4
SOUTH AFRICA	2.6	2.8	3.0	3.5	3.3
USSR	18.9	19.5	18.7	23.0	22.6

Source: Derived from: American Bureau of Metal Statistics,  
Non-Ferrous Metal Data 1979. (New York: ABMS, 1980), p.122.

TABLE A-5

## PERCENTAGE WORLD MINE PRODUCTION

GOLD 1975-1979

<u>COUNTRY</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
AUSTRALIA	1.4	1.3	1.7	1.7	1.6
CANADA	4.3	4.4	4.5	4.5	4.1
DOMINICAN REPUBLIC	0.5	1.1	0.9	0.9	0.9
GHANA	1.4	1.4	1.3	1.2	1.3
PAPUA-NEW GUINEA	1.7	1.7	1.8	2.0	1.8
PHILIPPINES	1.3	1.3	1.5	1.5	1.4
SOUTH AFRICA	59.6	58.9	58.2	57.9	58.2
RHODESIA	1.6	1.6	1.6	1.6	1.6
USSR	19.5	19.8	20.2	20.5	21.0
U.S.	2.8	2.7	2.9	2.6	2.3

Source: Derived from: American Bureau of Metal Statistics,  
Non-Ferrous Metal Data 1979. (New York: ABMS, 1980), p.109.



TABLE A-6

## PERCENTAGE WORLD MINE PRODUCTION

## SILVER 1975-1979

<u>COUNTRY</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
AUSTRALIA	7.7	8.0	8.1	7.3	7.4
CANADA	13.1	13.1	12.5	11.9	11.3
CHILE	2.1	2.4	2.5	2.4	2.5
JAPAN	2.9	3.0	2.9	2.8	2.6
MEXICO	12.5	13.5	13.9	14.8	14.6
PERU	12.4	11.4	11.7	10.8	11.0
POLAND	4.9	5.7	6.1	6.4	6.8
SWEDEN	1.5	1.5	1.6	1.5	1.7
USSR	14.2	14.0	13.3	13.4	13.9
U.S.	11.5	10.9	11.3	11.5	11.0

Source: Derived from: American Bureau of Metal Statistics,  
Non-Ferrous Metal Data 1979. (New York: ABMS, 1980), p.100

TABLE A-7

## PERCENTAGE WORLD MINE PRODUCTION

## IRON ORE 1975-1978

<u>COUNTRY</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
AUSTRALIA	10.9	10.4	11.2	10.7
BRAZIL	10.0	10.5	10.2	10.3
CANADA	5.2	6.5	6.6	5.3
CHINA	7.2	7.3	7.6	7.5
INDIA	4.6	4.9	5.0	4.9
LIBERIA	2.7	2.1	2.2	2.1
SOUTH AFRICA	1.4	1.8	3.1	---
SWEDEN	3.5	3.4	3.0	2.7
USSR	25.8	26.6	27.8	27.9
U.S.	8.9	9.1	6.6	9.4

Source: Derived from: American Metal Market,  
Metal Statistics 1979 (New York: Fairchild Publications,  
 1979), p.81

TABLE A-8

## PERCENTAGE WORLD MINE PRODUCTION

## COPPER 1975-1979

<u>COUNTRY</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
AUSTRALIA	3.0	2.8	2.8	2.8	2.9
CANADA	10.0	9.3	9.5	8.4	8.2
CHILE	11.3	12.8	13.2	13.1	13.5
INDONESIA	0.9	0.9	0.8	0.8	0.8
PERU	2.5	2.8	4.3	4.7	5.1
POLAND	3.2	3.4	3.6	4.1	4.1
USSR	14.9	14.3	13.7	14.4	14.4
U.S.	17.4	18.5	17.0	17.2	18.3
YUGOSLAVIA	1.8	1.7	1.6	1.8	1.5
ZAIRE	6.7	5.7	6.0	5.4	5.1
ZAMBIA	9.2	9.0	8.2	8.2	7.5

Source: Derived from: American Bureau of Metal Statistics,  
Non-Ferrous Metal Data 1979. (New York: ABMS, 1980), p.9

APPENDIX B  
Summary of Six  
Country Risk Indices

## SUMMARY

## COUNTRY RISK RATINGS

COUNTRY	JAPANESE <sup>1</sup> COUNTRY	EUROMONEY <sup>2</sup> 1980
	RANKINGS	RANKINGS
AUSTRALIA	9	17
BRAZIL	26	47
CANADA	3	33
CHILE	21	41
COLOMBIA	39	40
DOMINICAN REPUBLIC	--	60
CHANA	60	--
INDIA	50	13
INDONESIA	33	24
JAPAN	--	--
LIBERIA	51	--
MEXICO	25	34
MOROCCO	55	52
PAPUA-NEW GUINEA	--	31
PERU	57	64
PHILIPPINES	22	45
RHODESIA (ZIMBABWE)	--	--
SOUTH AFRICA	32	61
SWEDEN	8	4
U.S.A.	1	--
WEST GERMANY	2	--
ZAIRE	69	--
ZAMBIA	--	--

COUNTRY	INSTITUTIONAL <sup>3</sup> INVESTOR 1979	INSTITUTIONAL <sup>4</sup> INVESTOR 1980
	RANKINGS	RANKINGS
AUSTRALIA	10	9
BRAZIL	33	43
CANADA	5	5
CHILE	50	52
COLOMBIA	40	37
DOMINICAN REPUBLIC	71	75
GHANA	--	--
INDIA	49	54
INDONESIA	54	48
JAPAN	4	4
LIBERIA	68	69
MEXICO	25	25
MOROCCO	63	64
PAPUA-NEW GUINEA	--	--
PERU	76	72
PHILIPPINES	52	57
RHODESIA (ZIMBABWE)	83	80
SOUTH AFRICA	39	32
SWEDEN	14	13
U.S.A.	1	3
WEST GERMANY	2	2
ZAIRE	92	96
ZAMBIA	86	87



COUNTRY	WORLD POLITICAL <sup>5</sup>	BERI <sup>6</sup>
	RISK RANKINGS	RANKINGS
AUSTRALIA	LOW	11
BRAZIL	MEDIUM	20
CANADA	LOW	6
CHILE	MEDIUM	--
COLOMBIA	MEDIUM	--
DOMINICAN REPUBLIC	MEDIUM	--
GHANA	--	--
INDIA	--	--
INDONESIA	--	--
JAPAN	LOW	4
LIBERIA	--	--
MEXICO	--	19
MOROCCO	MEDIUM	--
PAPUA-NEW GUINEA	--	--
PERU	HIGH	--
PHILIPPINES	HIGH	--
RHODESIA (ZIMBABWE)	--	--
SOUTH AFRICA	MEDIUM	12
SWEDEN	--	13
U.S.A	LOW	3
WEST GERMANY	LOW	1
ZAIRE	HIGH	--
ZAMBIA	HIGH	--

1. Reported in Engineering News Record, Vol 203, August 2, 1979, p. 17.  
This rating involved a survey of 100 Japanese firms which have operated outside the country. A scale of 0 (worst) to 10 (best) was used to develop these rankings.

2. Source: Euromoney, February 1980, pp. 40-48.  
This ranking analyses the credit rating of 75 countries in terms of the syndicated loan market. Each country's loans were weighted by volume, spread and maturity. The precise formula used is:

$$\text{Average weighted spread\%} = \frac{\text{E volume} \times \text{spread} \times \text{maturity}}{\text{E volume} \times \text{maturity}}$$

Number of loans used includes the actual number of floating rate US dollar and Deutschemark loans used in the average weighted spread calculation. Loans with two or more tranches have been counted as two or more loans.

Average maturity refers to the sum of years divided by the total number of loans. Only loans included in the average weighted spread analysis have been taken into account.

Total number and total amount (public) refers to all loans in whatever currency signed in 1979 in \$US million equivalent arranged for Governments public utilities, central banks, state owned banks, municipalities and any other borrower which carries a state guarantee.

3. Source: Institutional Investor, Vol.13, September 1979, pp. 243-246.

This evaluation of country creditworthiness was undertaken by Institutional Investor. It involved a survey of 50 of the world's leading international banks and interviews with an additional 40 international banks.

4. Source: Institutional Investor, Vol. 14, March 1980, pp. 63-65.

5. Source: The National Underwriter, Vol. 84, February 22, 1980, p. 55.

This ranking is done by Frost and Sullivan, a market research firm. A high risk rank is defined as a 45% or greater probability of a major alteration in government personnel would occur. A low risk is defined as a probability of less than 15% of such a change occurring. A medium risk assigns a probability of 15-45%.

Frost and Sullivan's forecast includes both an 18 month and a 5 year time perspective.

6. Source: A.H. Parbo, "Presidential Address - 50th Anzaas Congress", 14 May, 1980, p. 9.

The BERI index is published by the BERI Institute in Delaware U.S.A. A Delphi methodology is used involving about 100 experts and 15 criteria as a basis for judgement.

In this case, Mr. Parbo only reported the first 23 countries. Countries ranked lower than this were not specified and it is, therefore, impossible to reflect the more extensive light of countries in the actual BERI Report.

## APPENDIX C

### Summary

### SUMMARY

1. Mineral production statistics from 1975 to 1976 for copper, gold, iron ore, lead, nickel, platinum, silver and zinc provide a basis from which to identify countries which are likely to be searching for mining investment. Communist states and New Caledonia are excluded from the analysis for a variety of reasons. This means that the following twenty-two countries are subjected to analysis:  
  
Australia, Brazil, Chile, Colombia, Dominican Republic, India, Indonesia, Japan, Liberia, Mexico, Morocco, Papua-New Guinea, Peru, Philippines, Rhodesia-Zimbabwe, South Africa, Sweden, U.S.A., West Germany, Zaire and Zambia.
2. Our review indicates that four countries - Chile, Australia, U.S.A. and Sweden - are likely to be strong competitors of Canadian efforts to attract investment. Mexico may also be able to use its oil resources to attract investment in mineral development projects.
3. Canadian mineral production statistics indicate that, with the exception of platinum, Ontario's share of total Canadian production has been declining in recent years.
4. Our examination of provincial mining taxation indicates that Ontario's mining taxes are higher than those of Manitoba, Quebec and British Columbia.
5. The report also demonstrates that when federal income taxes, provincial income taxes and provincial mining taxes are combined, only British Columbia has higher total taxation rates than Ontario.



6. The report suggests that Ontario might attract more mining investment if it were to alter its mining taxation rates.
7. The report concludes by noting that Ontario should continue to be an attractive place in which to invest for the next few years.







